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ORIGINAL ARTICLES.

ACUTE EDEMA OF THE LARYNX, WITH THE REPORT OF A CASE RESULTING FROM PYEMIA.[1]

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THE importance and rarity of acute edema of the larynx justifies me in calling attention to an interesting case of this affection that recently occurred in my practice:

On February 2, 1891, I was called in consultation with Dr. C. V. Boarman, of Washington, to see the patient, G. S., aged thirty years, a fish-dealer by occupation, and a man of strong physique. Upon entering his room I found him breathing rapidly and with great difficulty, but there was no audible stridor. The man's face was flushed and presented an anxious expression; the voice was husky, with a peculiar metallic quality; deglutition was painful and difficult. There was some swelling of the neck, and over the left thyroid gland there was an enlargement, about the size of a pigeon's egg, which was very painful on pressure. He expectorated a thick purulent secretion, the expulsion of which was attended by sharp, lancinating pain.

On examination of the throat, there was observed a slight redness of the posterior wall of the pharynx and of the fauces; but the parts could not be said to be the seat of active inflammation. By means of the laryngeal mirror, I found the epiglottis to be enormously swollen and very red, projecting from the base of the tongue over the laryngeal cavity, so that the interior of this could not be seen. Lying on either side of the swollen epiglottis, between it and the lateral walls of the pharynx, was thick, purulent secretion.

As the necessity for relief of the impending suffocation was so urgent, without further questioning the patient, I freely scarified the epiglottis with the laryngeal lancet. Each incision was followed by a discharge of blood and pus, and to encourage the discharge the patient was directed to gargle with warm water. In a short while, he expressed himself as feeling very much relieved, although I was unable to detect any diminution in the swelling of the epiglottis. Ice was applied externally, and the man was directed to swallow cracked ice frequently. In less than two hours the patient was again seen, and found in a state of great excitement, as he felt worse, and the dyspnea seemed to be increasing.

Examination showed the epiglottis still to be greatly swollen. I scarified again, making deeper incisions than before. The flow of blood was not very profuse, but the patient was able to expectorate more freely, the expectoration still being thick and purulent. This gave him more relief than he experienced from the first scarification, and the swelling was perceptibly lessened. Ice internally and externally was continued during the night. On the following morning, the patient was somewhat improved as to breathing and deglutition, but the voice was about the same. The epiglottis was found to be still very much swollen—so much so that the interior of the larynx could still not be seen. Scarification with deep incisions was again practised.

At the Garfield Hospital, whither the patient was now sent, the following history was obtained:

He had had frequent attacks of sore-throat, but they were always mild in character, lasting only a few days. For the past three years he had led a very intemperate life, and on one occasion was confined in an inebriate-asylum. He had never had syphilis, but several years previously he had a small venereal ulcer on the prepuce, which healed in a few days; no constitutional symptoms have ever developed. On the 9th of November, he contracted gonorrhea, for which he was treated by internal medication; but the discharge, while becoming less, never entirely ceased. On January 9th, he consulted a prominent surgeon, who, in addition to prescribing internal medication, passed a sound for the relief of a deep-seated stricture. The sound was passed for the second time, January 26th, and that night he had a severe chill; feeling ill on the following day, he took a Turkish bath, but without experiencing any relief. He continued to feel somewhat ill, with occasional chilly sensations, until February 1st, when he experienced a severe pain in the larynx, attended with great difficulty in breathing. About the same time he noticed that his neck was swollen. These symptoms increased in intensity until I saw him on the following day, and found the condition that I have already described.

February 3—the day of admission to the hospital: His temperature was 103°; pulse, 106; respirations, 30. There was a slight purulent discharge from the urethra. Examination of the urine revealed nothing abnormal, save a large number of pus-cells. I continued ice internally and externally; gave $\frac{1}{12}$ grain of muriate of pilocarpine hypodermatically, and kept water impregnated with the compound tincture of benzoin boiling in the room.

[1] Candidate's thesis presented to and accepted by the Council for membership in the American Laryngological Association at its Thirteenth Annual Congress, September 13, 1891.

4th, 8 A.M. The temperature was 99⅘°; pulse, 96; respirations, 30. Noon, temperature, 103⅘°; pulse, 108; respirations, 36. At 8 P.M., temperature, 103⅕°; pulse, 112; respirations, 42.

The patient was restless and did not sleep during the night; breathing was easier; the voice was not so hoarse; he was still expectorating a purulent secretion; the swelling of the neck was subsiding. Examination with the mirror showed a marked subsidence of the swelling of the epiglottis. In the evening the man complained of severe pain in the epigastric region and at the lower border of the left lung. The treatment of the previous day was continued, and in addition 3 grains of salol were given every three hours.

5th, 8 A.M. Temperature, 103⅕°; pulse, 108; respirations, 48. Noon, temperature, 103⅘°; pulse, 102; respirations, 44. At 8 P.M., the temperature was 102⅘°; pulse, 112; respirations, 48.

The pain at the lower border of the left lung continues. Examination reveals a diminution of the respiratory murmur over the lower part of the left lung, both anteriorly and posteriorly. No râles and no dulness on percussion are detected; the patient complains of pain and numbness in the left arm. The swelling of the neck has entirely disappeared; the swelling of the epiglottis has subsided, and for the first time the arytenoid cartilages and the ary-epiglottic folds are visible. The whole larynx is intensely red, the congestion extending as far down the trachea as can be seen. There is no indication of an abscess at the base of the tongue; the expectoration has ceased, and there is no pain on pressure over the larynx. The salol and ice were discontinued, and 3 grains of quinine were given every three hours; and the larynx was sprayed with a solution of tannin (gr. xx ad ℥j) at similar intervals.

6th, 8 A.M. Temperature, 101⅘°; pulse, 118; respirations, 44. Noon, temperature, 102⅘°; pulse, 116; respirations, 52. 8 P.M., temperature, 101⅘°; pulse, 114; respirations, 52. A pronounced jaundice appeared this morning. The treatment of yesterday was continued, with the addition of tr. ferri chloridi, gtt. xx, every three hours.

7th, 8 A.M. Temperature, 100⅘°; pulse, 120; respirations, 50. Noon, temperature, 102⅕°; pulse, 120, respirations, 40. 8 P.M., temperature, 100⅘°; pulse, 122; respirations, 46. Jaundice still continues; the patient complains of pain in the left hypogastric region. Percussion shows no increase in the area of hepatic dulness, and there is no sensitiveness on pressure.

8th, 8 A.M. Temperature, 100⅘°; pulse, 120; respirations, 50. Noon, temperature, 102⅕; pulse, 120; respirations, 50. 8 P.M., temperature, 100⅗°; pulse, 124; respirations, 50. The patient is very restless and weak; jaundice is not so marked; there is incessant cough, but no expectoration. Examination of the larynx shows no subsidence of the congestion, and there is little or no secretion in the larynx and trachea. About 9 o'clock on this evening, the patient complained of intense pain in the left hypogastric region, and suddenly cried out that "something had given way internally." I saw him at about 9.30, and found the abdomen somewhat distended and painful; the skin bathed in cold perspiration; the pulse feeble and scarcely to be counted. He did not rally from this condition, and died at 1.30 A.M., death resulting probably from the rupture of an abscess of the liver.

It was unfortunate that a post-mortem examination could not be obtained, so that the diagnosis could be verified.

It is possible that the disease commenced as a primary erysipelas of the larynx, to which the pyemia was secondary. I think, however, that the history of the case points more forcibly to the urethra being the source of the infection that caused the blood-poisoning, with a secondary phlegmonous laryngitis.

The history of acute edema of the larynx dates from 1765, when Morgagni[1] found, upon post-mortem examination, a serous infiltration of the mucous membrane of the soft palate, fauces, and larynx. It was not, however, until 1808, when Bayle[2] read his remarkable essay before the School of Medicine of Paris, that this disease received a place in pathology. He unfortunately gave it the name of edema of the glottis, which term we frequently find applied to cases of edema of the larynx even at this late period. After Bayle came Tuilier,[3] who in his thesis describes the symptoms of edematous laryngitis, and states that the fluid is either serous or sero-purulent. He was the first to establish by means of a digital examination the existence of cushions or pads caused by the swelling of the ary-epiglottic folds.

Finaz de Seisel,[4] was the first to suggest the passage of an elastic catheter into the larynx for the prevention of suffocation from edema of the larynx. It does not appear, however, that he ever performed this operation himself, but he had often seen it practised by Desault. Numerous memoirs appeared after those of Bayle and Tuilier, but it was Bouillard[5] that recognized the inflammatory nature of the disease. He reported three cases, in each of which the edema was of the secondary variety. Cruveilhier[6] also recognized the inflammatory nature of the affection, and gave it the name of submucous laryngitis. He divided the disease into supra-glottic and infra-glottic edema. In 1852, Sestier[7] wrote his elaborate treatise on edema of the larynx, and collected the surprising number of 245 cases. From these he compiled his statistical results, which have been made use of in every important communication on

[1] De Sedibus et Causis Morborum.

[2] "Mem. sur l'Œdème de la Glotte," Journ. de Méd. de Paris, 1819.

[3] Essai sur l'Angine Laryngée Œdemateuse. Paris, 1815.

[4] Quelques Observations Chirurgicals récueilles à l'Hôtel-Dieu de Lyon. Paris, 1813.

[5] "Recherches et Mémoires pour servir a l'Histoire de l'Angine Laryngée Œdemateuse," Archiv Gén. de Méd., 1825.

[6] Traité de Anatomie Pathologique. Paris, 1852.

[7] Traité de l'Angine Laryngée Œdemateuse. Paris, 1852.

the subject since that time. In 1862, Mandl[1] studied chronic edema of the larynx with the aid of the laryngoscope, and recognized the ary-epiglottic folds transformed into glistening cushions. This was the first communication on the subject after the introduction of the laryngoscope.

Acute edema of the larynx may arise quite independently of any inflammation; in such case it is characterized by an infiltration of a serous fluid in the submucous connective tissue of the larynx. It may occur in the course of hepatic obstruction, in acute and chronic nephritis, from malarial cachexia, from blood-stasis in the course of chronic disease of the heart and lungs, and, according to Von Ziemssen,[2] as a result of circumscribed obstruction in the laryngeal veins as a result of compression of the superior and inferior thyroid veins. That form due to inflammation is characterized by an infiltration of a serous, sero-purulent, purulent, and sometimes by a sero-sanguineous fluid in the submucous connective tissue. According to the statistics of Sestier, the disease seldom occurs before the age of fifteen years, and generally attacks persons between eighteen and fifty years of age, the majority of his cases being between eighteen and thirty-five years. Of 187 adults, 131 were men and 56 were women. Before thirty years of age the disease was generally a complication or sequel of some acute disease, while after that period it occurred in the course of chronic affections of the larynx.

In 1873, George von Hoffmann[3] found among 6062 post-mortem examinations made at the Berlin Charité, from 1869 to 1871, 33 cases of edema of the larynx, 10 of which were primary and 23 secondary. In 1879, Felix Peltesohn[4] found, in 3387 post-mortem examinations made at the same institution (from 1873 to 1878) 210 cases of acute edema of the larynx. Of these 149 were in men, 40 in women, and 21 in children. He found that the disease affected men generally between eighteen and sixty years, while the women were generally between eighteen and thirty-four years. Forty-four of his cases were due to local affections, and 164 were in consequence of general diseases.

In studying the etiology and prognosis of edema of the larynx, the statistics of Sestier cannot be taken as a guide, for it must be remembered that they were compiled before the days of the laryngoscope, when it was impossible to make a positive diagnosis. Furthermore, he did not separate the acute from the chronic form of the disease, and he included cases in which a dense deposit was present.

[1] "De la Laryngite Œdemateuse Chronique," Gaz. des Hôp., No. 69, 1862.

[2] Cyclopedia of the Practice of Medicine, vol. vii; N. Y., 1878.

[3] Edema Glottidis, Berlin, 31. März, 1873.

[4] Berl. klin. Wochenschr., October 28, 1889.

The statistics of Hoffmann and Peltesohn, having been taken from the post-mortem room, represent only the fatal side of the question; and, as the latter author states, if the records of a large clinic were available, other figures than he gives would be obtained. It would also be interesting to know what influence the modern treatment of this affection has had on the rate of its mortality. For this purpose I have collected the cases on record in the library of the Surgeon-General's Office of the United States Army, and have found reports of 96 cases. Of this number 86 were in adults—73 in men and 13 in women, 2 being in negroes—and 10 in children. The majority of the cases were between twenty and fifty years of age. In the cases of children, 7 were under six years, the youngest being only five months. In 4 cases the edema was the cause of sudden death.

Edema of the larynx is said to be primary or secondary, but on this point authorities are not in accord. Gottstein[1] doubts whether it ever occurs as a primary affection, and believes that in the majority of cases it is partly or entirely due to local disturbances. Mackenzie[2] believes that in the cases of edema following simple inflammation, the disease is due to blood-poisoning. He states that in every case that has come under his observation ample opportunity of acquiring septicemia has been present. Virchow[3] is of the opinion that in all cases of acute edema without a clear etiology, the affection is really one of primary erysipelas of the larynx. Cases do occur, however, that are apparently primary, and in nearly all of them there is a history of exposure to cold, while the body is in a low state of health or after great bodily fatigue. By reference to the tabulated list of diseases causing edema of the larynx, it will be observed that bodily fatigue and exposure to cold constituted the cause in thirteen cases. Marboux[4] reports an interesting case, apparently of primary edema of the larynx, in a man, who prior to the attack was in perfect health. While bathing with some companions, his head was forcibly submerged under the water, and in less than twenty-four hours he had a severe attack of edema of the larynx.

The disease occasionally occurs in the course of an acute laryngitis; but it is more frequently due to the extension of an inflammation of the adjacent parts. I find that it was the result of an acute pharyngitis in three cases, of tonsillitis in six cases, in three of which the inflammation had progressed to

[1] Die Krankheiten des Kehlkopfes, p. 100.

[2] Diseases of the Pharynx, Larynx, and Trachea, p. 201.

[3] Verhandlungen der medicinischen Gesellschaft, Berlin, 11. Mai, 1887.

[4] "Reflexion sur l'étiologie et la symptomatologie de l'Œdema de la Glotte," Rec. du Mém. de Méd., Paris, 1875, 3 sér., xxxi, 382.

suppuration, and in one case it was due to an abscess in the tonsillar region.

Edema of the larynx is sometimes developed in the course of syphilitic and tuberculous inflammations of the larynx, although Gougenheim[1] thinks that true edema occurs very rarely in tuberculosis of the larynx, and, when it does occur, it is generally the result of caries of the cartilages. On the other hand, pseudo-edema is of much more frequent occurrence in the course of tuberculosis. This condition is not characterized by a collection of fluid in the cellular tissues, but by an infiltration of tuberculous material.

Diseases of the kidneys have long been recognized as constituting a cause of acute edema of the larynx, but an infrequent one. Fauvel,[2] in 1863, was the first to call attention to acute edema of the larynx as the primary symptom of disease of the kidneys. He reported three cases in which the edema was the first and only symptom of renal disease. Since that time Waldenburg[3] and De Bary[4] have made similar observations, the latter author reporting a case of acute edema of the larynx in a child as the first symptom of acute nephritis following scarlet fever. Among the general diseases that seem to give rise to edema of the larynx may be mentioned typhoid and typhus fevers, debility following chronic malarial poisoning, rheumatism, septicemia, and pyemia.

The following is a tabulated list of the cases that I have collected, showing the diseases that preceded acute edema of the larynx:

LOCAL DISEASES OF THE THROAT AND LARYNX.		GENERAL DISEASES.	
Acute laryngitis	9	Chronic disease of the kidneys	3
Subacute laryngitis	1	Typhoid fever	3
Pharyngitis	4	Typhus fever	6
Erysipelas	3	Debility following malarial fever	5
Tonsillitis	6	Rheumatism	1
Abscess in tonsillar region	1	Frost-bite and resulting gangrene	1
Tuberculosis of the larynx	3	Gastric fever	1
Diphtheria	1	Septicemia	1
Syphilis of the larynx	2	Pyemia	1
Extension of an inflammation of the cellular tissues of the neck	1	Part of a general edema for which no cause could be assigned	1
Straining of the vocal cords	2	Alcoholism	2
Scald throat	3	Variola	1
Consecutive to chronic bronchitis	1	Consequent on great bodily fatigue and exposure to cold	13
Ecthyma of the face extending into the larynx	1		
	38		39

[1] "De l'Œdema Laryngien dans la Tuberculeuse du Larynx," Ann. des Maladies de l'Oreille et du Larynx, 1884, x, 226.

[2] Aphonie Albuminurique, Rouen, 1863.

[3] Allg. med. Centralzeitung, 1865, 10.

[4] Archiv für Kinderheilkunde, 1886, viii, 96.

Traumatism	5
Following the administration of large doses of iodide of potassium	1
On forcible submersion of the head under water	1
	7

Leaving the etiology in 12 cases unaccounted for.

In general, the edematous infiltration is developed in those parts of the larynx in which the submucous cellular tissue is in greatest abundance. These parts are the anterior surface of the epiglottis, the ary-epiglottic folds, and the ventricular bands.

Hajek[1] has recently made some interesting experiments on animals to discover the parts most prone to edematous infiltration. He finds that there is a layer of loose cellular tissue on the anterior surface of the epiglottis that passes up to within half a centimeter of its border and there ceases. From this point the membrane is firmly adherent to the cartilage. This cellular tissue on the anterior surface of the epiglottis is continuons with that lining the lateral walls of the pharynx in front of the pharyngo-epiglottic ligament. The ary-epiglottic folds are made up of two layers of cellular tissue, the internal being continuous with that found at the apex of the epiglottis on its laryngeal surface, while the external is continuous with that lining the pyriform sinus and the lateral wall of the pharynx behind the pharyngo-epiglottic ligament. This arrangement of the submucous cellular tissue and the position of the pharyngo-epiglottic ligament, which divides this part of the larynx into anterior and posterior portions, have a very important influence on the course of an edema. It is frequently observed that in edema of the ary-epiglottic folds due to local causes, such as ulcers, traumatism, perichondritis of the arytenoids, the infiltration is limited by the pharyngo-epiglottic ligament; and it is only when the edema is of great intensity and the collateral inflammation is decided in degree that this ligament is broken through. As the submucous cellular tissue of the anterior surface of the epiglottis and that of the ary-epiglottic folds are separated by the pharyngo-epiglottic ligament and pass up into the lateral wall of the pharynx on either side of it, it is clear that inflammations of the pharynx may occasionally extend to the anterior surface of the epiglottis, and occasionally to the ary-epiglottic folds, accordingly as the inflammation is on a plane anterior or posterior to the pharyngo-epiglottic ligament. Edema of the anterior surface of the epiglottis never passes over the border of this cartilage to enter the laryngeal cavity, and it only passes over into the ary-epiglottic folds when the infiltration is so extensive as to break through the ligament.

[1] "Anatomische Untersuchungen über das Larynx-œdem," Archiv für klinische Chirurgie, xlii, 146.

The edema is generally confined to that part of the larynx above the vocal cords. It, however, occasionally extends below the cords affecting the trachea and bronchi. In rare cases, it is limited to that part of the larynx below the vocal cords, in which case it is known as the sub-glottic variety. This form of the disease was recognized by Sestier, Cruveilhier, and Gibb, and of the 96 cases I find that 2 are of the sub-glottic variety: in one, reported by Gibb,[1] in a man thirty years of age, who had an inflammation of the cricoid cartilage due to traumatism, a resulting abscess caused edema of the sub-glottic space; in the other, reported by Lefferts,[2] in a boy five years of age, the disease followed exposure to cold. Both patients recovered.

The vocal bands are very rarely affected, as they contain very little cellular tissue. However, I find 2 cases recorded. In one reported by Natier,[3] the infiltration was due to tuberculosis; in the other, reported by Semon,[4] the edema was due to excessive use of the voice.

The order of frequency of the parts affected in my list of cases was: the epiglottis alone in 7; epiglottis and ary-epiglottic folds in 14; ary-epiglottic folds alone in 5; soft palate and ary-epiglottic folds in 3; arytenoids and vocal bands in 1; right arytenoid in 1; arytenoids and commissure in 4; vocal bands alone in 2; right arytenoid and corresponding ary-epiglottic fold in 1; epiglottis and arytenoids in 1.

The disease is generally bilateral, but occasionally it affects only one-half of the larynx. Feiber[5] describes a case in which the edema was contiguous to an acute pharyngitis, and in which the infiltration was limited to the corresponding half of the larynx. S. Solis-Cohen[6] reports two cases, both of traumatic origin, and Lefferts[7] one case that followed exposure to cold.

Acute edema of the larynx occasionally sets in with such suddenness that no warning is given, and the patient dies before aid can be rendered. Generally, however, the onset is more gradual, and the patient complains of a sensation as of a foreign body in the throat, the removal of which he attempts by swallowing and by the insertion of the finger in the throat; deglutition is painful and difficult, the voice is altered in timbre, dyspnea is always present, and the inspirations are frequently accompanied by a whistling, stridulous sound, especially when the ary-epiglottic folds are the seat of the infiltration. The patient is restless and has an anxious expression, and unless relief is obtained the face becomes cyanotic, and death results from asphyxia.

The diagnosis of this affection is not difficult: the symptoms of stenosis, in connection with the dyspnea and the alteration of the voice, indicate the larynx as the part affected, and by means of the laryngeal mirror the nature of the affection is at once revealed. The tumefied parts are red, though sometimes translucent and pale-yellow in appearance. In the absence of the laryngoscope, exploration with the index-finger as recommended by Tuilier can be practised, when the swollen epiglottis or ary-epiglottic folds can be felt. Great care must be exercised in carrying out this procedure for fear of causing suffocation.

Although acute edema of the larynx is a very serious affection, the prognosis is now not so unfavorable as it formerly was, owing to the practice of scarifying the swollen parts, and also to the early performance of tracheotomy when indicated. Sestier found that of 213 cases 158 proved fatal, in spite of tracheotomy having been performed in thirty. Bayle gives much more unfavorable figures, as 16 of his 17 cases proved fatal. Kühn (quoted by König[1]) collected 95 cases, 36 of which were fatal. Of the 96 cases that I have collected, the disease proved fatal in 34, giving a mortality of 35 per cent., which is a little less than that given by Kühn. The prognosis must be greatly influenced by the cause of the edema and by the intensity of the inflammation, as well as by the age and sex of the patient. That form due to an extension of inflammation from the pharynx generally does well when taken in time, but when the inflammation is due to erysipelas, or to constitutional causes, such as typhoid fever, septicemia, and pyemia, the chances are extremely unfavorable. The disease is more serious in men than in women, while the greatest mortality is in cases between ten and forty years of age.

Prompt local measures must be employed in order to relieve the obstruction to respiration. In no severe disease is there such speedy relief obtained by means of a simple operation as in acute edema of the larynx from scarification of the swollen parts. Sometimes the relief appears almost magical. Proposed and practised by Lisfranc in 1825, scarification did not receive the recognition of this eminent surgeon's colleagues, probably, as suggested by Dr. Bartlett,[2] on account of jealousy. We even find Cruveilhier,[3] a number of years later, saying he

[1] Lancet, London, Sept. 4, 1869.
[2] New York Med. Journ., Aug., 1877.
[3] Ann. de la Policlinique de Bordeaux, 1889, i, 71.
[4] "Isolated Edema of the Vocal Cords," St. Thomas's Hospital Reports, vol. xiii.
[5] "Zur Behandlung des circumscripten Kehlkop-fœdems," Wochenbl. d. k.-k. Gesellsch. d. Aerzte, Wien, 1870, 497.
[6] THE MEDICAL NEWS, Phila., 1885, xlii, 677.
[7] New York Med. Journ., Aug., 1877.

[1] Lehrbuch der Chirurgie, Bd. i, 615.
[2] "The History, Diagnosis, and Treatment of Edematous Laryngitis," Western Journ. Med. and Surg., Louisville, 1850, vol. xxxiii, 209.
[3] Dict. de Méd. et de Chir. pratique, "Laryngite," xi, 41.

"doubts whether this little operation of scarification has ever been performed." It was not until 1847, when the late Dr. Gurdon Buck,[1] unaware that scarification of the epiglottis had been previously performed by Lisfranc, practised it at the New York Hospital, and owing to his series of successes the operation became a popular one. It is best performed with the laryngeal lancet, with the aid of the laryngeal mirror, but in the absence of these it can be effected with the ordinary curved bistoury, covered, except for the last quarter-inch of its length, with adhesive plaster. After scarification, gargling with warm water will greatly facilitate the expulsion of fluid from the tissues. The cold coil or an ice-bag should be placed over the larynx, and the patient be directed to swallow cracked ice frequently. This, in conjunction with the hypodermatic injection of pilocarpine, as first proposed by Gottstein,[2] will hasten the absorption of the fluid and often prevent a recurrence of the edema. The atmosphere of the room should be rendered moist by boiling water containing the compound tincture of benzoin. Inhalation of astringents will often assist in the absorption of the infiltrated fluid and the restoration of the inflamed membrane to health.

If, in spite of the scarification, the edema continues and the dyspnea increases, then tracheotomy should be performed without further waiting. The lives of many patients have been saved by the early performance of this operation; and remembering the liability of the edema to extend into the trachea, it is best to operate low down, making sure that the knife has entered the trachea, so that the tube will not pass between the swollen mucous membrane and the wall of the trachea—an accident that has happened to good operators.

Intubation has been successfully practised by Desault,[3] Macewen,[4] Meier,[5] Ingals,[6] and Altamirano,[7] but it has not been performed often enough for any estimation of the value to be placed upon it as a substitute for tracheotomy. Its efficiency, of course, depends upon the part of the larynx that is edematous. Ingals refers to one case in which the obstruction to respiration could not be relieved by the laryngeal tube. It would seem, however, that cases of chronic edema and those acute cases in which the edema is moderate in degree and in which there is danger of paralysis or spasm of the posterior cricoarytenoid muscles, such as in the unfortunate case reported by J. Solis-Cohen,[8] are best suited for intubation.

[1] Trans. Amer. Med. Assoc., Phila., 1848, i, 135.
[2] Die Krankheiten des Kehlkopfes, S. 104.
[3] Charazac: Étude sur l'Œdème du Larynx, Paris, 1885.
[4] Brit. Med. Journ., Dec. 28, 1878.
[5] Med. Record, May, 1888.
[6] Sajous's Annual, vol. iv, 1890.
[7] Ibid.
[8] Diseases of the Throat and Nasal Passages, p. 443.

CONTRIBUTIONS TO THE STUDY OF HETEROPHORIA AND ITS RELATION TO ASTHENOPIA, HEADACHE, AND OTHER NERVOUS SYMPTOMS.[1]

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I ASSUME that at least all but a very small minority of the members of this Society recognize the existence of a condition of disturbed equilibrium of the external ocular muscles that gives rise to well-marked symptoms of asthenopia, headache, and other nervous symptoms; I also assume that we have not as yet reached the last word on the therapeutics of these conditions, and that we are all desirous of accumulating trustworthy evidence on the merits of the different methods that have been proposed for their relief. I can say in support of this, my humble contribution, that the observations have been made with a mind free from bias or prejudice, and the facts recorded with honesty.

I have used the terms heterophoria, exophoria, esophoria, etc., introduced by Dr. Stevens, because they are short and distinctive, and designate, with sufficient exactness, the actual conditions.

I have not found heterophoria of so common occurrence as has been reported by some observers. For a number of years I have, with few exceptions, tested every case of optic defect that came under my observation in private practice, for a disturbance of equilibrium in the external muscles, and taking 100 cases at random in my case-book, I find that among that number there were 22 in whom heterophoria of some kind and degree was present. In most of these no attempt was made to correct the fault, either because the patient was not seen again, or because the correction of the other ocular difficulties gave all the relief that was desired. Heterophoria does not, any more than ametropia, always give rise to asthenopia or call for correction; and I am, from my own observation, inclined to believe that heterophoria of even small degree is rarer than ametropia—that is, that human eyes are more normal in regard to their muscular equilibrium than to their optic condition.

We are not yet, I am free to confess, in a position to generalize and formulate positive dicta in the matter, but my experience would lead me to infer that an exophoria or an esophoria of two prism-diopters in persons of average health does not, usually, give rise to trouble on ordinary use of the eyes; hyperphoria of that amount, I think, does. Moreover, the defect is a quantity constantly varying with the condition of the patient, so that we must allow ourselves considerable latitude in estimating its actual and permanent amount. It is this fact, probably

[1] Read at the meeting of the American Ophthalmological Society, held at Washington, September, 1891.

beyond all others, that lies at the foundation of our difficulties in therapeutics.

I examine the equilibrium always at an infinite distance, the eyes being then in a condition of accommodative relaxation and in a state of practically normal parallelism, or at least in a condition of normal muscular inertia.

In testing, I use the flame of an Argand burner in my ophthalmoscopic room, six meters away, turned low, and produce diplopia by means of an eight-diopter cylinder. This has all the advantage of the Maddox prism, with the additional advantage that, by moving the lens at right angles to its axis, the very much elongated image effected by the cylinder moves up and down or laterally, enabling patients who are not very ready at observation to tell at once the relative position of the gas-jet and the streak of light—that is, whether the latter passes through the flame or to one side. On the black wall of the ophthalmoscopic room I have ruled white squares with six centimeters between the lines; opposite the center of the system of squares I place the flame of the Argand burner. The patient can then indicate, if there be any diplopia, the number of squares that separate the light-streak, and the side on which it is from the flame. At the distance of six meters each square of six centimeters represents one prism-diopter of deviation, and thus the number of spaces of separation gives the degree of heterophoria expressed in the number of the prism necessary to correct it; and the side on which the light-streak is seen gives us knowledge of the kind of heterophoria.

I consider the test at an infinite distance the necessary one, and that at the working distance less important because less reliable. It is common to find quite a considerable heterophoria at a distance, and yet none with the dot-and-line test of Gräfe. The accommodation comes in here to vitiate the result. The power possessed by the individual muscles, as expressed by their ability to overcome prisms, I do not rely on so much as I formerly did. The power of overcoming prisms is one of education largely, and, while not unduly depreciating the method, I consider it inferior to the test at infinity. It is here that the real relative power of the muscles is shown, and that is what we want to know. I do not deny the possibility of the existence of a positive weakness of the interni that will give a separation of the double images in convergence, which is not apparent at the test at infinity; but I think such a condition must be rare.

Another point on which we are in need of statistical investigation is the relative frequency of esophoria, exophoria, and hyperphoria. Formerly, insufficiency of the interni was considered the sole cause of muscular asthenopia—as it was called, to distinguish it from that due to accommodative strain—and I think we have all been surprised to find how often weakness of the externi is the cause. Dr. Noyes, as is well known, has found this condition the more frequent of the two.

I find that among 50 recorded cases of heterophoria taken in succession from my case-book, there were 28 cases of exophoria, 18 of esophoria, 3 of hyperphoria, and 1 of combined esophoria and hyperphoria.

Coming now to therapeutics, there are, of course, only two methods of treatment, if we recognize the existence of heterophoria apart from ametropia, and these methods are: prisms, and operation on the muscles. All cases of heterophoria do not demand correction for the immediate relief and comfort of the patient any more than all cases of ametropia do; but there can be no question that in the one case as in the other such correction will place the patient in a much better condition ocularly, and probably forestall a future break-down. But there is, unfortunately, a large, suffering class, clamoring for relief, and it remains for us to choose between these two methods of cure.

It would seem, at first blush, that prisms would fill all indications, and that we had only to select the prism that appears to correct the faulty position of the double images and the difficulty would be overcome and the desired relief obtained. In this, however, our hopes are often blighted. In some cases, it is true, we hear no further complaint, and the prisms are worn with perfect satisfaction. In another contingent of cases, the relief is only partial, and in many others no benefit at all is experienced.

It has heretofore been assumed by practical ophthalmologists, and, I think, by all physiologic opticians as well, that, theoretically at least, the prism is able to correct optically all of the difficulty. Though the prism is the simplest of all optic instruments except plane glass, it does not seem to be remembered by these that its optic properties are not a little complex, even under the conditions that usually prevail. Physicists, however, have for a long time been aware of these phenomena, and have treated of them mathematically, and a full consideration of the subject can be found in the recent works of Heath[1] and Aldis.[2]

In order that light be deviated by a prism in accordance with the well-known laws laid down in our ordinary treatises, the pencils must be parallel. When they become divergent, not only do these laws become modified in such a manner that deviation for the divergent is less than that for parallel

[1] R. S. Heath: Geometrical Optics. Cambridge, 1887.
[2] W. Steadman Aldis: Elementary Treatise on Geometrical Optics. Third edition, Cambridge, 1888.

pencils, but, in addition, the prism exercises a demonstrable astigmatic action—that is, a point from which the rays fall divergently on a prism has, after their passage through the prism, a focal interval of Sturm in which, however, the focal lines are not, as in sphero-cylinders, straight, but of a peculiarly curved form. Moreover, it has been found that the thickness of the prism itself cannot be wholly ignored, as we have been accustomed to do, and that the refraction is different at its apex and base. It is only in prisms of five prism-diopters and less that the accepted laws of prismatic refraction apply.[1]

Then, again, there is the annoyance almost always experienced in getting accustomed to the use of prisms—a difficulty that is overcome only in many instances after a long period of education, and sometimes not at all. And furthermore, there is a class of patients that protests strenuously against the use of spectacles of any kind. There are many women who would rather submit to any number of tenotomies than wear glasses for a week. And we must remember, too, that the wearing of glasses is a burden and a great inconvenience, and in not a few instances a handicap in the race of life. We have so accustomed ourselves to the inevitable spectacles in correcting ametropia that we do not sufficiently recognize that in heterophoria there is an alternative; finally, there are those cases in which prisms do not give the desired relief. If, then, we shall determine that heterophoria is correctable by an operation, that operation will and should be the rule, and the use of prisms the exception.

The correction of disturbance of muscular equilibrium by tenotomies is now on trial in this country, and evidence in its favor is constantly accumulating. Beyond the sea, so far as my knowledge extends, nothing of any consequence is being done in that direction in advance of what was accomplished by Gräfe, whose work was directed wholly against the insufficiency of the interni in myopia. One explanation of this may be, that they do not have the amount of asthenopia from the same cause there as we do here.

Like nervous prostration, I think the asthenopia of ametropia and heterophoria is a disease developed largely by the American method of living, which, however, on that account is none the less a disease requiring at our hands the most careful consideration. If tenotomy will restore the lost equilibrium of the muscles, it is certainly the most scientific, the readiest, and in every way the most commendable method of dealing with the difficulty. My own experience with the operation is somewhat limited, but could have been greater had I been less conservative and cautious. The results, however, have been eminently satisfactory and such as to convince me that not only is it a legitimate operation, but one that, under certain circumstances, is imperatively demanded.

As briefly as possible I will give the salient points in the histories of five cases in which I have done the operation of partial tenotomy.

CASE I.—Miss J. H., a Western girl, "with no nonsense about her," aged nineteen, was seen first December 13, 1889. She had been struck on the right eye by a stone when eight years old and there is a remaining scar on the cornea on the outer margin. Vision, however, was the same as in the other eye, namely $\frac{5}{5}$, which with +0.75, 100° R. and +0.5, 80° L. became $\frac{5}{5}$. The keratometer gave L. 155° 44 D. 15° × 1, R. 75° 44 D. 150° × 1¼. She had suffered so much from her eyes and head that it had been impossible for her to get any systematic education. Any use of the eyes would give her a violent headache. She was treated for a long time by one of the best ophthalmic surgeons in the West, but with no permanent relief. The muscular equilibrium had not, however, been tested until she came to me. I found that she had at the first examination an esophoria of 5 P. D. She fused 5 P. D. base in and 20 P. D. base out. On the 16th her esophoria was 7, and on the 24th 8°. She was given R. +0.75, 100° prism No. 4, base out. L. +0.5, 80° prism No. 4, base out. From the use of these glasses she experienced some relief, but she was still unable to use the eyes with any degree of regularity or reliability. On June 17, 1890, the esophoria was 10 P. D., and on the 18th 12 P. D. I then advised a tenotomy and it was readily acceded to, the patient being willing to submit to anything for relief. Accordingly, on the 23d I made a partial tenotomy of the right internus, correcting the esophoria to 4 P. D. On July 9th she was ordered R. 3 P. D. base out, L. 1 P. D. base out, and went away for the summer. She used her eyes all summer in fair comfort, getting more use of them in three months, she said, than in any three years before. She came home and went to hard work and her eyes began to trouble her again, and her prisms did not afford her the desired relief. I then made another partial tenotomy of the same muscle on October 22d, leaving only a few fibers above and below. The correction was complete for an instant, the images then separating somewhat, homonymously. In a few days this settled down to 2 P. D., at which it has remained approximately ever since. She has been able to use her eyes with comfort most of the time since; has continued her musical studies, and sews and reads as she has never done before in her life. As she says herself, "It has made a new girl of me," and certainly her general appearance is vastly better than before the operation.

CASE II.—Miss Annie B., a stout, healthy-looking girl, aged seventeen, was first seen March 23, 1886. She had at the time myopic astigmatism, R. —2 ⊖ 0.5,90°; L.—1.5⊖—0.5,90°. No note is found that the muscular equilibrium was examined at that time.

[1] Mr. C. F. Prentice has given a graphic representation of this. American Journal of Ophthalmology, Oct. 1891.

She returned on February 25, 1889, with serious complaint of her eyes and head. She looked worn and haggard, and her headache was almost constant and had been for eighteen months. The myopia had increased in the right to —5 D., and there was at the first examination an exophoria of 4 P. D. She fused 4° base in, 14° base out. She was ordered the prisms in addition to her ametropic glasses, but they were not at all satisfactory. She had a little less pain when she used them than when she did not, and the exophoria had increased to 8 P. D. I advised a tenotomy, and it was done on November 13, 1889. The exophoria was reduced to 3°. This varied from time to time, being sometimes more, sometimes less, until it finally settled at 3° on November 26th. On the 6th of December she reported that she reads all she wants to without pain and that her headaches are gone. On January 28, 1891, she had an attack of asthenopia and the old pain in the head from overwork, and the exophoria was 4 P. D., and we thought we might have to make a tenotomy; but a few days' rest relieved it, and she has been in comparative comfort ever since.

CASE III.—Miss C. W., aged twenty-one, I first saw April 24, 1887. She complained of great pain from the use of her eyes, which went from the back of the eyes to the back of the head and neck. She had suffered then for a year and had done everything for it. Her vision was $\frac{6}{6}$ and there was no ametropia. She fused 3° base out, 21° base in, and there was an exophoria of 5° or 6°. She was given: R. 3° base in, L. 2° base in. I heard nothing more from her until January, 1891, when she came to me from her physician with a request that her eyes be examined again. She had been wearing the prisms ordered nearly four years ago and with some relief at first, but the headaches had lately become so constant and intense that life was a burden. She was willing to submit to anything that promised relief. Her exophoria was 8 P. D. She accepted the proposition for a tenotomy readily, and I made it January 31st, reducing the defect to 2°. On February 4th it was 4°, on the 10th 4°, and on the 14th 6°. The relief was at the time very marked. I saw her no more until June, when she returned with the old complaint. I found that the exophoria was again 8 P. D., and the red glass gave double images, the result of the first operation being *nil*. Another partial tenotomy was made on the right eye on June 13th, this time cutting away a triangular piece of the middle of the tendon. I allowed at this operation an over-correction of 1 P. D., which remained after a conjunctival suture was applied. On the 10th the stitch was removed and complete correction was found, the false image varying however sometimes a little to the right and sometimes to the left. On the 18th the exophoria was 2 P. D., on the 22d 1½ P. D., and on the 26th 26 P. D. She then went away for a vacation, her nervous system being a total wreck.

CASE IV.—Mrs. I. D., a lady aged fifty-eight, five years ago had some trouble with her head that was diagnosticated as congestion of the brain. Not long afterward she noticed that her eyes pained her on use and that headaches were frequent. These symptoms increased and for three years she has been unable to use her eyes at all. The reading of more than a dozen lines of print at one time is impossible and she has accustomed herself to write with her eyes shut. Her general health seems to be good and she spends the greater part of her time out of doors in the country. Her disease was considered retinitis by an oculist under whose care she had been for a long time past, and the prognosis was regarded as grave. There was no evidence of retinitis apparent at the time of my examination, and with $+0.75$ V $= \frac{6}{6}$ in R., and with $+0.75 \bigcirc + 0.5$, 90° V $= \frac{6}{6}$ in L. A necessarily hasty examination at that time revealed an exophoria of 5 P. D. at infinity, and a much greater one for the working distance. A red glass before one eye produced diplopia. The nature of the trouble was explained to her, and she was encouraged to believe an operation might relieve her if the glasses (3° base in, R., 2° base in, L.) did not lead to a satisfactory improvement. She reported by letter, from time to time, that the prisms were beneficial, but the relief was not perfect, and finally she came down on May 9, 1891, to have the operation performed. The exophoria was then 10 P. D., as it was on the 12th when the operation was performed. She was able to fuse 1 to 1½ P. D., base out. I made a tenotomy of left externus, leaving a few fibers above and below, and the correction was well-nigh perfect. I then cut out a small triangular piece of the tendon between these attached fibers. I did this in the belief that a greater diminution of power would follow its reattachment on account of its diminished length. Immediately after the operation, she fused 2 P. D. base in. On the 13th she fused 3 P. D. and a 3 P. D., base in, superposed the images. On the 15th, 2 P. D. superposed them, though there was a great deal of unsteadiness, as there was indeed until she left for home on the 17th. On that day, however, she read several pages without fatigue. I have not seen her since, but the value of the operation in her case can best be expressed by an extract from a letter which she wrote me some four weeks after the operation: "You will remember that before going to you I could do absolutely nothing that required the use of my eyes, without pain in both head and eyes so great that I would be obliged to stop in a few minutes. When I first came home there would be some sense of strain, some little quivering sensation after reading or sewing for a while; this has gradually passed off, and I now read or sew or write as long as is convenient—as much as three or four hours at a time." Naturally such a result as this is not likely to lead me to an early abandonment of partial tenotomy in heterophoria.

CASE V.—Miss H. J. B., aged twenty, a sister of Case II, I saw for the first time on July 25, 1891. She is a strong young woman, both mentally and physically, but had been obliged to give up her studies at Wellesley College on two occasions for a year on account of persistent headache, confined almost exclusively to the occiput and back of the neck. For this she had tried all sorts of things, but with no avail. She would often be disturbed in the night by the pain, and it was commonly present

on waking in the morning. As her vision was good, she did not connect the pain with her eyes, but only came to have her eyes examined as a *dernier ressort*, and with a hope that something might be found the correction of which would relieve her of her burden. She is emmetropic, the ophthalmometer showing only the normal corneal astigmatism and V = $\frac{5}{5}$. She had at the first examination a manifest exophoria of 7 P. D. The next day it was 8 P. D. I gave her No. 3 prisms for each eye, to be worn during my vacation. I saw her next on the 6th of September and the manifest exophoria was 10 P. D. The prism had given some little relief, but she was more than willing to have a tenotomy performed, and this I did on September 9th, on the right eye, leaving some fibers above and below, but excising a piece of the middle portion. The exophoria was reduced immediately to less than 2 P. D., and the false image in the test would sometimes be directly above the true image. It varied but little from day to day and has finally settled down to 2 P. D. She fuses 5 P. D. base out, and in the test at the working distance there is no demonstrable insufficiency. This was only two weeks ago, and the headaches are already much improved.

A word or two in regard to the technique of the operation. It has been doubted in some quarters whether a permanent weakening of the muscular power can follow a division of less than the whole of the fibers of the tendon. In some cases it would seem that after the final healing of a single operation the heterophoria was little, if at all, diminished. To what the failure is due is not always apparent. I have thought it possibly caused by a want of sufficient retraction of the divided fibers, and have sought to compensate for this by an excision of a portion of them. The results, in the cases in which I have done this, have appeared to justify the procedure. Some, and among them Dr. H. D. Noyes, have favored a total separation of the fibers and a subsequent regulation by means of sutures. This would undoubtedly accomplish the purpose in view, but it seems to me that the risk of malposition of the tendon in the new insertion is very great in this plan. A slight rotation of the globe in adjusting the sutures might easily bring about such a change in the relative position of the eyes as to render the later condition of the patient much worse than the first. This danger of an improper reattachment of the muscle is one to which I think we have not paid sufficient attention, and it has induced me to modify my operation for advancement by leaving a few lateral fibers attached and advancing the tendon along the line of its central fibers. Dr. G. T. Stevens has considered this question in his last paper in Knapp's *Archives*, July, 1891.

The therapeutics of heterophoria by prisms has been treated of in so thorough a manner by so many competent authorities that its consideration here by me would unnecessarily increase the length of this paper, already over-long. In many cases I have found prisms satisfactory, especially when the heterophoria was of low degree, but in a large number of instances their use did not bring the relief desired, and almost never when the heterophoria exceeded 4 P. D.

Among the exceptional cases is the following:

CASE VI.—Miss C. N. T., aged eighteen, has been suffering from violent headaches for a number of years, and they have been almost constant during the last twelve months. Her vision is $\frac{5}{5}$; no ametrophia. She fuses 5 P. D. base down, 1 P. D. base up; has a hyperphoria of 6 or 7 P. D. Diplopia caused by red glass before one eye. I advised a tenotomy, but it was refused, and I ordered 3 P. D. base up in R., 3 P. D. base down in L. With these she has been using her eyes in fair comfort, with only one breakdown, from over-study, since January of this year. It is more than likely, however, that a tenotomy will yet have to be done.

Note, January 22, 1892.—As some time has elapsed since the foregoing histories were made, a report of the present condition of the patients will add to the interest and value of the statistics.

Case I is doing well, and has no cause of complaint on the part of her eyes or head, except that she is not able to read as much as she likes, which would be almost continuously. Other work, such as sewing, writing, and music, give her no trouble.

Case II reports that she has only an occasional headache, which can be referred to causes not connected with the eyes.

Case III returned from her short vacation still in a run-down condition, and with headaches on any effort of any kind. She is one of those unsatisfied, uncontrollable patients who demand immediate relief. She went under the care of another physician, who "treated the origin of the eye trouble in the general system," and did nothing for the eyes themselves. In time she began to improve in general health, and after a while the headaches disappeared. I have no hesitation in giving the tenotomies the credit of whatever permanent relief she has experienced. In patients as exhausted as she was, it takes weeks or even months for a full recovery to be effected.

Case IV still continues to use her eyes as she wants to with ease and comfort.

Case V has been doing work during the last three months that would have been impossible for her to have done before, and with only a moderate degree of discomfort. The headaches in the morning are gradually going off.

In Case VI I finally made tenotomies, as I felt sure I should have to do. She came complaining of some headache and pain in the eyes when she used them for any length of time. The prisms, though helpful, did not give permanent or constant relief. I first tenotomized the superior rectus of the left eye, reducing the hyperphoria to 4 P. D. Two weeks later I operated on the inferior

rectus of the right eye, getting complete correction. Four weeks after the last operation she writes that the relief has been complete, and that she has no trouble at all.

ELECTRO-PUNCTURE—ITS MOST USEFUL MODIFICATIONS AND ITS VALUE IN THE TREATMENT OF FIBROID TUMOR

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THE method of inducing atrophy of myo-fibromata of the uterus by currents from electrodes introduced into the substance of the tumors by puncture deserves special consideration, from the fact that it is essentially a bolder and more radical procedure than the other electric methods of dealing with these growths. Gynecologists who use electricity are greatly divided as to its value and freedom from risk, some rejecting it altogether, and others considering it the only method worthy of use. My own position in the matter has been represented as that of warm advocacy of puncture—a statement that was a surprise to me at the time, although I have recently had reason to look on the procedure under certain conditions and circumstances with increasing favor.

There is no doubt that this method presents itself with much favor to the beginner in the treatment of fibroid tumors, and I think this is often because tyros have the false impression that electricity acts in these growths by dissolving them. No error could be greater, and it is a mistake that is likely to lead to harmful work in the direction of over-treatment. It is true that we do not know the mode in which electro-puncture does act, but my observation has convinced me that the period between treatments is an essential part of the treatment itself, to be carefully arranged in each case, and that results are not proportionate to current-strength alone. These two facts, when taken together, certainly indicate that electricity does not accomplish the reduction and dissipation of fibroid tumors by electrolysis pure and simple, because this is a chemical disintegration depending in extent only on the number of millicoulombs used. Were this the method of its action, by an increase in the current it would be possible to dissolve the tumor at once and at one application. In the cases under my observation in which the tumors have disappeared,[2] no such currents were used. The current-strength was frequently smaller than that used in tumors that did not disappear. However we may explain it, it is certain that the absorbents bear an important relation to a shrinking fibroid after each electric séance, and that mere electrolysis is but a part of the work, and a part that may be subordinate to a more subtle interference with tissue-integrity and metamorphosis.

From experience I am not disposed to think that puncture presents necessarily any advantages over intra-uterine applications when either method is feasible. In certain cases apparently well adapted to both methods I have observed that puncture was better, but this seemed to be due to irritative conditions of the appendages that hindered or nullified the good effects of the intra-uterine applications. In such cases the punctures were much better borne, and produced no reaction.

VAGINAL ELECTRO-PUNCTURE.

Speaking of vaginal puncture alone, and premising that it should never be performed unless a portion of the tumor can be reached directly through the posterior vault, it may be said that the spot punctured is accessible and may be kept under rigid antisepsis, which is a distinct advantage over the prolonged application of a strong current to a restricted spot within the uterus.

As to the method of performing vaginal puncture, I have urged from the beginning that the trocar should be insulated through the healthy tissue in order that the latter may heal at once. This may be called *buried puncture*, in contradistinction to that of Apostoli. Not wishing to make a patulous opening or to have a possible slough at the point of application, both of which I believe are liable to occur at the positive pole, my punctures have been almost invariably negative. To meet these indications I have recently modified the specially insulated trocar formerly employed, and now use one of steel, combining certain features of my own and some of Apostoli's latest pattern. The one exhibited to you has, as you see, the shoulder now employed, I believe, by Apostoli, to prevent the instrument being inserted beyond one-half centimeter, but in this case the shoulder is one and a half centimeters from the point, permitting a possible insertion to the latter depth. Only the first half-centimeter from the point is exposed for the electric action, the remaining centimeter being covered by hard rubber that is flush with the needle-point, the diameter of the needle here having been lessened. The rubber insulation is vulcanized on the shaft, and presents a continuous insulation from the point to the attachment-socket at the posterior extremity. This has been the most satisfactory instrument thus far used by me, being strong and stiff, free from impedimental handles and sheaths, and incapable of being

[1] Read at the first annual meeting of the American Electro-Therapeutic Association, September 25, 1891.

[2] For a report of five such cases see Annals of Gyn. and Ped., July, 1891.

inserted more deeply than intended. It can be made aseptic by boiling, and I have even employed the spirit flame when prepared to remedy any damage it might cause to the insulation.

As I said before, buried vaginal puncture will reduce fibroids and remove pain when the intra-uterine method is not tolerated. I have, morever, never had a mishap or bad effect from its use, and have had pain following it on but one occasion, which was possibly due to a dispensary patient walking some distance home within an hour after the puncture. This freedom from mishaps I nevertheless attribute almost entirely to a careful selection of cases, as I can well conceive that the procedure would risk injury to important organs if employed in any case other than those in which the tumor is accessible by virtue of a practical protrusion into the posterior vaginal vault.

ABDOMINAL ELECTRO-PUNCTURE.

There is another form of buried puncture to which I wish to direct your attention particularly. I allude to insulated puncture through the abdominal wall. Abdominal electro-puncture has been condemned by myself, in unison with recent workers in electro-gynecology, but the thought occurred to me some months ago that my condemnation was of that unwise kind that precedes a trial, and that the bad results reported in the past occurred in pre-aseptic days. There are certain abdominal tumors of large bulk that are so far removed from the pelvic extremity of the cervix and vicinity of the vagina as to make intra-uterine treatment difficult, tedious, and painful, and vaginal puncture impossible. These tumors are beneath our hands externally, with nothing but a layer of fat and muscle and two layers of peritoneum intervening. As contrasted with the pelvic route, puncture from this direction is free from the embarrassing neighborhood of important organs, is direct and exact, but possesses the one disadvantage of being intra-peritoneal. Experience in two cases which have been punctured on several occasions, has convinced me that the peritoneal bugbear is overdrawn, at least when aseptic precautions are observed. Peritonitis and its effect, adhesion, can only follow the introduction of septic material, or a possible necrosis from a too strong positive puncture.

The details of the procedure as devised by me are as follows: The punctures being invariably negative, small steel needles are used, three at each puncture, attached by branched wires to a single pliant copper wire as a conducting cord. No. 22 or 24 insulated wire is much more convenient than an ordinary conducting cord. For the puncture-needles there can be no better form devised than the straight Hagedorn surgical needle found in every instrument-shop. These needles possess the advantage of great ease of penetration combined with lightness and strength, and the slit puncture made by them admits the increased bulk of the covering without hitch. This slit form of puncture also heals easily without a scar. The needle should be about two and a half inches long, the first half-inch from the point being left bare, and the portion above covered with hard rubber, vulcanized on the shank as thinly as consistent with good insulation. It is easily attached to the copper wire by the latter being passed through the eye and wound around the shank—by simple threading, in other words—or the needles may be permanently soldered to cord-tips, as suggested by Dr. Walling. These needles, properly insulated, sterilized, and attached to the negative pole of the battery by the branched wire, are easily and painlessly thrust into the tumor through the skin, the surface having been previously thoroughly asepticized by the most approved method, and just before the insertion of the needle chilled by a rhigolene spray. The current-strength has varied in my punctures between 60 and 100 ma., and the duration from six to eight minutes. After removal of the needles the minute spots made are sealed with a little borated cotton and plaster, or by the direct application of collodion.

As to frequency, it is probably best to allow at least two or three weeks to elapse between each application of electricity in this manner, although this depends on the size of the tumor and the field of tumor-surface accessible to the method. It need scarcely be said that no punctures should be made at any spot that might be covered by intestinal convolutions.

The immediate inconveniences that follow these punctures, such as tenderness and pain, are generally less than those following an intra-uterine application. As a measure of precaution, one patient under this treatment was kept in bed in the Sanatorium for twenty-four hours after each puncture, but another was punctured at the dispensary, and on each occasion walked home shortly afterward. In neither of these cases has sufficient time yet elapsed to permit a full determination of results, but in each case there has been a marked decrease in size, and in one case a lessening of the pain that had rendered the patient helpless. There has not been an unfavorable incident of any kind, and the absence of adhesions between the tumors and the abdominal walls is easily proved. The result, in my opinion, is to open anew the question of the propriety of employing buried abdominal electro-puncture in the treatment of those large fibroid tumors, both intra-mural and subperitoneal, that lie above the pelvic brim.

MICROCOCCUS PNEUMONIÆ CROUPOSÆ.

BY GEORGE M. STERNBERG, M.D.,
LIEUT.-COLONEL AND SURGEON U. S. ARMY.

SYNONYMS: *Microbe septicæmique du salive* (Pasteur); *Coccus lancéolé* (Talamon); *Micrococcus Pasteuri* (Sternberg); *Pneumococcus of Fraenkel; Diplococcus pneumoniæ* (Weichselbaum); *Bacillus salivarius septicus* (Flügge); *Streptococcus lanceolatus Pasteuri* (Gamaléia).

The object of the present brief paper is to call attention to the earlier researches relating to the important pathogenic micrococcus to which it refers. This seems desirable at the present moment, inasmuch as the distinguished author of the Croonian Lectures, recently published in *The Lancet*, has given an account of the history of the micrococcus in question, in which he fails to recognize my priority in its discovery. He says:

"Its history is as follows: In 1881, M. Pasteur observed, to his surprise, in inoculating a rabbit with the saliva of a child affected with hydrophobia, that the animal died rapidly of septicemia. Subsequently Dr. Sternberg, of Washington ('Der Mikrokok der Sputum-septikämie,' *Deutsche med. Wochenschrift*, 1887, p. 44), having observed that the inoculation of pneumonic sputum induced in the rabbit symptoms similar to those observed by Pasteur ('Note sur une maladie nouvelle provoquée par la salive,' *Bull. de l'Acad. de Médecine*, 1881), repeated the experiment with his own saliva. As this animal also died of septicemia, he was led to investigate the subject bacteriologically, and found that in all the animals inoculated the same microzyme occurred, and that it corresponded with Pasteur's description of the *Microbe septicæmique du salive*." (Quoted from *The Lancet* of November 28, 1891, p. 1209.)

Now, as a matter of fact and of record, the present writer discovered the micrococcus in question in the blood of rabbits inoculated with his own saliva, in the city of New Orleans, in September, 1880, three months before Pasteur discovered it (December, 1880) in the blood of animals inoculated with the saliva of a child that died of hydrophobia in one of the hospitals of Paris.

At the date referred to I was not able to follow up my experiments immediately, as I was engaged in another investigation. But they are recorded, with the date upon which they were made, in my special report to the National Board of Health, on "Experimental Investigations Relating to the Etiology of the Malarial Fevers," which was submitted some time before the publication of Pasteur's note referred to by Dr. Burdon-Sanderson, and was published in the *National Board of Health Bulletin*, vol. iii, Washington, 1881–2.

Impressed with the surprising fact that my saliva contained a pathogenic micrococcus that quickly proved fatal to rabbits inoculated with the fluid containing it, I went to Philadelphia in January, 1881 (before the publication of Pasteur's first communication), for the express purpose of making further investigations with reference to this micrococcus in the laboratory of the Medical Department of the University of Pennsylvania.

"Here eleven inoculation-experiments demonstrated (*a*) that the virulence noted was not due to season or locality, as the same result followed inoculations made in Philadelphia during the winter months as had been obtained by similar inoculations in New Orleans during the heat of summer; (*b*) that this virulence was not an individual peculiarity, inasmuch as eleven rabbits inoculated with the saliva of six different persons, gave eight deaths and three negative results."

In March, 1881 (still before the publication of Pasteur's first communication), I resumed my experiments in the biologic laboratory of Johns Hopkins University, Baltimore, and by the inoculation of pure cultures obtained from the blood of infected rabbits, proved that the fatal septicemia induced in rabbits by inoculating them with my saliva was, beyond question, due to this particular micrococcus. I also determined many of its biologic characters, accurately described its morphology, and made photo-micrographs showing it in the blood of an infected rabbit. The results of this investigation are published in my paper on "A Fatal Form of Septicemia in the Rabbit, Produced by the Subcutaneous Injection of Human Saliva" (*National Board of Health Bulletin*, vol. ii, 1881; also, *Johns Hopkins University Stud. Biol. Lab.*, Baltimore, vol. ii, 1882, pp. 183–200, 1 pl.)

The publication of this paper was considerably delayed after I had completed my research, and in the meantime Pasteur had published his "Note sur une maladie nouvelle provoquée par la salive," referred to by Dr. Burdon-Sanderson.

My earlier researches were followed by others, in which I used this micrococcus as a test of the comparative value of various disinfecting agents,[1] and in the course of which I determined various points relating to its biologic characters.

In January, 1885, I made a series of experiments with pneumonic sputum, which led me to the identification of the oval coccus, usually in pairs, found in this material, with the micrococcus previously

[1] "Experiments with Disinfectants," Johns Hopkins Univ. Stud. Biol. Lab., Baltimore, vol. ii, 1882, pp. 201-212.

"Induced Septicemia in the Rabbit," Amer. Journ. Med. Sci., Phila., 1882, pp. 69–76.

"Germicide Value of Therapeutic Agents," Amer. Journ. Med. Sci., Phila., 1883, pp. 321–343.

isolated from my own saliva. In the paper[1] in which I gave an account of these experiments I named the micrococcus in question *M. Pasteuri*—a name that has not been generally accepted, and for which I now propose to substitute the name placed at the head of this paper, *M. pneumoniæ crouposæ*. In my paper last referred to, which was read before the Pathological Society of Philadelphia in April, 1885, and published in *The American Journal of the Medical Sciences* for July of the same year, I say: "It seems extremely probable that this micrococcus is concerned in the etiology of croupous pneumonia . . . . but this cannot be considered as definitely settled by the experiments which have thus far been made upon the lower animals."

Fraenkel's first paper[2] relating to the presence of this micrococcus in pneumonic exudate was published shortly after my paper last referred to.

Since the date last mentioned the extended researches of Fraenkel,[3] Weichselbaum,[4] Netter,[5] Gamaléia,[6] G. and F. Klemperer,[7] and others, have established the fact that this micrococcus is the usual cause of croupous pneumonia.

Recognizing this, we propose hereafter to designate it *Micrococcus pneumoniæ crouposæ*. This corresponds with the nomenclature adopted by Flügge in describing other pathogenic bacteria—*e. g.*, *M. gonorrhœæ*, *B. typhi abdominalis*, *Spirillum choleræ Asiaticæ*.

The name "diplococcus pneumoniæ," which has been adopted by most German bacteriologists, and following them by many English and American authors, is objectionable because this coccus is not truly a diplococcus, although commonly seen in pairs in preparations made from pneumonic exudate, or from the blood of an infected rabbit. But it is also frequently seen in short chains of three or four elements, and in cultures upon nutrient agar it often forms long chains. It is, therefore, more properly called a streptococcus. Gamaléia calls it *Streptococcus lanceolatus Pasteuri*. We prefer, however, the more general generic name, "micrococcus," and do not consider it necessary that the name should be descriptive of the mode of grouping of the cocci.

It may be questioned whether "diplococcus," as a generic name, is entitled to a place in our nomenclature. It simply represents a form of association that is common to all micrococci, although more persistent in some than in others, and which results from their multiplication by binary division. Now, some of the so-called diplococci multiply in one direction only, forming pairs, and longer or shorter chains, as in the case of the micrococcus under consideration; while others multiply in two directions, forming pairs and, by transverse division, groups of four—*e. g.*, *Diplococcus citreus conglomeratus* (Bumm), *Diplococcus roseus* (Bumm). Thus a most important generic character—division in one or in two directions—is ignored by those bacteriologists that use the term diplococcus as a generic appellation.

Again, some of the micrococci commonly described under the generic name "streptococcus" are seen, under certain circumstances, only, or chiefly, associated in pairs.

We object, then, to the use of the term "diplococcus," as a generic name for microörganisms of this class, as being unscientific and misleading.

[1] Paper published in the Transactions of the Pathological Society of Philadelphia, vol. xii, 1885; and in The Amer. Journ. Med. Sci., July, 1885.

[2] "Bacteriologische Mittheilungen," Verhandl. d. Vereins f. innere Med., July 13, 1885.

[3] Zeitschr. f. klin. Med., Bd. xi, 1886.

[4] Ibid., Bd. x, 1886.

[5] Comptes rend. Soc. de Biol., Paris, Nov. 4, 1887.

[6] Ann. de l'Institut Pasteur, t. ii, 1888.

[7] Berl. klin. Wochenschr., 1891, Nos. 34 and 35.

CLINICAL MEMORANDA.

A CASE OF HYDROGEN DISULPHIDE IN THE URINE.

BY LOUIS KOLIPINSKI, M.D.,
OF WASHINGTON, D. C.

A RETIRED gentleman of sixty-seven, strongly addicted to alcohol, which had seriously undermined his robust constitution, had been treated for chronic gastritis, the result of the long-continued use of intoxicants. He had recovered sufficiently to digest bland food, when a return to his old habits soon caused a relapse. He developed insomnia, mental hebetude, and impairment of memory to such a degree that on one occasion, whilst about in the city, he was unable to find his way home. There had long been feebleness and unsteadiness in walking and complaint of shooting pains in the lower limbs, which, with a decided atrophy of their muscles, were ascribed to chronic alcoholic neuritis. His wife had noticed a slight evening fever, which at first could not be confirmed. There was complete anorexia, and with this there was an intermittent desire for strong drink. His feebleness confined him to bed, and apathy made him converse but little. Profuse nightly incontinence of urine alternated with a frequent desire to urinate by day. The prostate was moderately enlarged, but further urethral and vesical exploration was omitted, because of the man's general condition.

My attention had been called to the strong, peculiar odor of the urine before the symptoms of vesical disturbance began. On examination I found, June 5, 1891, the urine of a red color; acid reaction; slightly turbid; without sediment; specific gravity 1018; no albumin, bile, or sugar. By lead-acetate paper, H_2S was found to be present. A few epithelial cells were found.

For one month—during which time the patient improved so much that he was able to leave his bed, digest food, and take a renewed interest in the things of every-day life—the urine continued of the same composition. It was frequently examined, and with strict precaution as to its freshness, and the continuous presence of H_2S was uniformly detected. The question to be solved was, Where and how did the H_2S originate? The most plausible theory of intestinal decomposition and absorption was entertained and rejected, the evacuations being fairly regular and healthy. The speculation that its origin was from preëxisting cystin could not be proved by finding the latter, and finally the otherwise normal character of the urine excluded the assumption that it was a product of abnormal substances like albumin or pus. The books at hand helped me to no clue.

At the end of a month the patient's condition again grew worse. His bad symptoms were intensified, nocturnal fever returned, and the urinary incontinence grew annoying. A persistent hiccough gave the patient no rest. There now appeared a new light to clear up the mystery of the H_2S. The patient began to complain of pains about the anus at the site of a former ischio-rectal abscess. There was found on the right side around a small, circular cicatrix a moderate area of induration, extending forward to the scrotal fold, slightly tender and fluctuating. A free incision gave exit to about an ounce of pus having a strong odor of H_2S. The abscess was thoroughly washed out and left clean and dry. The hiccough had now continued for twenty-four hours.

The night of this day (July 4th) the patient was comatose, with a rising axillary temperature of 104° F.; the pulse was 140, the respiration 44. The hiccough was still present. The skin was burning hot; the body entirely relaxed; the soles of the feet responded to irritation. The bladder was emptied by catheterization twelve hours after the abscess had been opened, and the urine thus collected was found to present these characteristics: color red; acid reaction; specific gravity 1019; slightly turbid; opaque sediment; H_2S present; a trace of albumin; indican in excess; granular epithelium, and blood-corpuscles.

With the removal of the catheter the hiccough, continuous for over forty-eight hours, ceased. The status of the case was sufficiently desperate to justify a fatal prognosis. The man was, however, treated with repeated enemata of caffeine and antipyrin (total, twelve grains of caffeine and thirty grains of antipyrin). In a few hours he showed slight symptoms of improvement, the temperature becoming stationary and then declining, so that at 4 A.M. he was conscious. The next day the thermometer did not rise above normal. The patient conversed with his family, recognizing each and saluting them individually, but at intervals became lost in a mild delirium. There were persistent efforts to eject mucus from the throat. He took fluid nourishment readily. Toward noon and again toward evening he vomited large quantities of altered blood. On the following day diarrhea set in; the stools were offensive and contained undigested material, showing the existence of gastro-intestinal indigestion. Bismuth and opium stopped the discharge. The urine contained an excess of indican, but was otherwise normal. H_2S was not again found in it. The delirium was worse at night. The man at times complained of abdominal pains, and the inguinal and hypogastric regions were slightly tender; the respiratory and heart sounds were normal; the skin was not jaundiced; the face had an ashy hue, with darker pigmentation of the eyelids. There was occasional hiccough. The fever now returned and the patient grew drowsy and soon could be aroused only with difficulty. Incontinence of urine became complete.

On the 13th of July he was unconscious, the temperature at its maximum being 103° F. The body was bathed in profuse sweats; the left half felt cooler than the right, and lay as in cerebral hemiplegia, but there was no paralysis. This state became intensified, and the patient expired quietly on the 15th.

The symptoms as narrated, and as they successively presented themselves, added additional interest to the case. The intense febrile reaction, the apparent improvement and the fatal return of the typhoid symptoms made the diagnosis obscure.

The autopsy, which was confined to the abdominal cavity, showed a dilated stomach, its mucous membrane, as well as that of the small intestine, containing spots and patches of extravasated blood. The kidneys were cirrhotic, the right containing several small cysts and calcareous infarctions. The liver was in a state of fatty degeneration, but not markedly diminished in size; there was little evidence of cirrhosis. The spleen was dark and friable and not enlarged. In the gall-bladder was a little pale bile and two small calculi. The skin was of a natural color, and there was no fluid in the abdominal cavity. The ischio-rectal abscess was thoroughly explored and found empty and granulating. The bladder was contracted, and there was no induration or inflammation in its neighborhood. It appears, then, that acholia was the cause of death. The absence of icterus was a singular feature.

The urine in this case was especially instructive. Standard works furnish scant information on this subject, or none at all. This is particularly true of works on urinary analysis. Here was an old ischio-rectal abscess (the residual variety of Pajet), for a long time manifesting itself only by the presence of a decomposition-product in a natural secretion.

PERFORATING WOUND OF THE RIGHT LUNG; RECOVERY.

BY GEORGE EVANS READING, M.D.,
OF WOODBURY, N. J.

ON October 2d, in my absence, an urgent message was left at my office, to come at once and see R. E. G., who, it was stated, "was dying." I had, on previous occasions, attended the man for severe attacks of intestinal colic, and jumped to the conclusion that the present trouble was of a similar nature.

On reaching his home, three miles out of the city, I found that the man was suffering from injuries caused by the horns of a vicious bull that had attacked him, tossing and goring him several times. The man was seated in an easy chair, in a condition of decided shock, the surface of the skin covered with a clammy sweat, and the pulse almost imperceptible at the wrist. The respiration was rapid and shallow. Any attempt to assume the recumbent posture brought on an attack of suffocation.

I immediately administered a hypodermatic injection of morphine sulphate, gr. ¼, with atropine sulphate, gr. $\frac{1}{100}$. Respiration and circulation soon improved.

Put to bed and examined, it was found that the body was covered with scratches and bruises; on the right side of the thorax was a wound three inches long, the center of which was two and a half inches below the right nipple. Through this wound, air was expelled with each expiratory act, but little or none entering during inspiration. The wound had evidently been bleeding profusely, as the patient's clothing was saturated with blood.

The skin and superficial fascia were torn from the ribs for some distance above and at each extremity of the external wound; in the fourth interspace, almost exactly beneath the right nipple, was an opening through which the air was escaping. The wound in the intercostal muscles was three-fourths of an inch in diameter; it evidently communicated with one or more of the larger bronchi, as there was a free passage of air through it during both inspiration and expiration, when the overlying tissues were held up; but when these tissues were undisturbed they acted as a valve and prevented the entrance of air during inspiration. There was a slight prolapse of lung-tissue into the wound in the intercostal muscles, but, as the tissue did not project beyond the outer surface of the ribs, it was deemed best to leave it undisturbed. There was no evidence of hemorrhage into the pleural cavity.

The wound was thoroughly irrigated with a hot one-to-one-thousand solution of corrosive sublimate. A firm, thick pad was placed over the wound in the lung. A bundle of No. 8 iron-dyed silk was laid at the bottom of the external wound, to afford drainage, and the wound was closed by means of interrupted silk sutures. The area of the injury was covered with a pad wrung out of a one-to-two-thousand solution of mercuric chloride; this, in turn, was covered with a dry pad extending some distance in every direction beyond the periphery of the former, and the whole dressing secured by a wide bandage applied around the chest and over the shoulder in such a way as to limit as much as possible the movement of the ribs on the injured side.

At the end of an hour, as the patient still presented symptoms of shock, the hypodermatic injection of morphine and atropine was repeated, and alcoholic stimulants were ordered. At 3 P.M.—eight hours after the accident—the patient had not yet fully reacted; the temperature was 97.5°, and the pulse was 60. By 10 P.M. reaction was fully established, and the temperature had reached 99.5°. The temperature reached 100.5° at three o'clock the next afternoon, but by 10 P.M. it had receded to 99.5°, and it never again reached 100°. It remained in the neighborhood of 99.5° for four days, when it became normal in the morning; three days later—one week after the injury was received—the evening temperature was also normal.

The first dressing was not disturbed for one week. Upon its removal it was found that the wound had united by first intention, except at the posterior angle, which was kept open by the silk strands used for drainage. These were now removed, and the wound washed out with a one-to-two-thousand bichloride solution, and the dressings were re-applied. This dressing was also left in position for one week; upon its removal the wound was found to have healed solidly throughout, and the sutures were removed.

Not one drop of pus formed during the whole course of treatment; the total amount of drainage was only sufficient to soak through two layers of Canton flannel (of which the pads were composed, no better material having been at hand), over an area five inches long by two inches in width.

Convalescence was uneventful, except for an attack of intermittent fever that developed four weeks after the injury was sustained. This yielded readily to quinine and arsenic. Ten weeks after the injury was received, the man was attending to his usual duties.

REMARKS.—The fortunate issue in this case was largely due to the fact that the wound was of such a nature that the skin and superficial fascia could be used as a valve to close the opening in the lung, so that the task of rendering the wound aseptic was an easy one, so far at least as direct contamination was concerned. The fact of the patient being in the pure air of the country was an important factor in the result, as thus the risk of septic inoculation of the wound by the way of the air-passages was reduced to a minimum. The small amount of blood that escaped into the pleural cavity also had an important bearing upon the result, for with a large hematoma of the pleura the patient would have had a greatly diminished chance of recovery.

179 SOUTH BROAD STREET.

TYMPANITES AND PREGNANCY.

BY BARTON COOKE HIRST, M.D.,
OF PHILADELPHIA.

ONE will find in almost all text-books on obstetrics the rules for differentiating tympanites from pregnancy, Winckel's book being a notable exception; but nothing is said about the coëxistence of the two, although the diagnosis may be much obscured if the abdominal

cavity is greatly distended by flatulence and at the same time contains a pregnant womb. While demonstrating abdominal palpation to a small class, the individual represented in the photograph was brought before me. On first palpating the abdomen, it occurred to me that the woman was not pregnant at all, as I could feel nothing

distinctive, and percussion yielded a tympanitic note all the way down the median line to the symphysis. On more careful palpation, however, a tumor was distinguished on the right side of the abdominal cavity corresponding in size and shape to the gravid womb near term. On auscultation, the fetal heart-sounds were heard far to the right. On percussion, there was an area of dulness (marked on the photograph) which, it may be observed, was confined entirely to the right side. The abdominal walls were so tense that it was quite impossible to feel any characteristic parts of the fetus. As may be seen in the photograph, the distention of the abdomen is perfectly symmetrical. The presence of the pregnant uterus is masked on account of the greater distention by the inflated intestines. On careful percussion and palpation, it could be demonstrated that coils of intestines overlapped the uterus on the left, so that the area of dulness did not represent the true width of the uterus. I have seen the intestines in front of the womb in only one other case, in which the girl had laced so tightly that the uterus at the sixth month was reduced to about four inches or less in breadth, but was lengthened almost to the liver, the upper part above the umbilicus being covered by intestines.

By the coëxistence of tympanites and pregnancy, the abdomen (as can be seen in the illustration) is naturally very much enlarged, presenting the following measurements:

Circumference	117 cm.
Symphysis to umbilicus . .	21 "
Umbilicus to ensiform cartilage .	23 "

It would be very easy to overlook pregnancy in such a case, especially before the sixth month, when the uterine tumor would scarcely be appreciable by palpation, except under ether and with deep pressure, and even so might be indistinguishable. Indeed, I understand that this woman had applied for admission to the Philadelphia Hospital some months before, and had been turned away, as she was declared to be not pregnant.

NEW INSTRUMENTS.

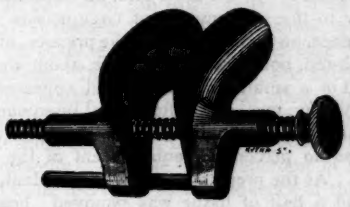
A NEW NASAL SPECULUM.

BY H. N. SPENCER, A.M., M.D.,
PROFESSOR OF DISEASES OF THE EAR IN THE MISSOURI MEDICAL COLLEGE AND ST. LOUIS POST-GRADUATE SCHOOL OF MEDICINE.

IN the present state of otological practice a nasal speculum is quite as much a necessity as an aural speculum.

For mere inspection and for much practical work, I have found the conical form, a modification of the aural speculum, to answer a good purpose. I described this instrument in 1879 in an article on the "Mechanics of Naso-pharyngeal Practice."[1] There are instances, however, especially in operative procedures, in which this does not fulfil all of the requirements, the dilatation being necessarily limited. The objections to the specula at our command—Thudichum's, Fränkel's, Duplay's, etc.—are generally so well understood that it is unnecessary to recite them. The instrument presented herewith has grown out of my own necessities, and I submit it for the consideration of others.

As represented in the cut, the two blades travel on a right and left thread-screw. One-half the length of the screw has a right-hand and the other a left-hand thread. There are twenty-four threads to the inch, and pitched in opposite directions: it is evident that every complete revolution of the screw will separate the blades one-twelfth of an inch. If a more rapid operation of the blades should be desired, a screw of greater pitch would effect it. The blades are so adjusted on the screw that they will come together where the right- and left-hand threads meet. This relative position is constantly maintained by means of the small guide-rod that appears in the cut running parallel with the screw. One end of the guide-rod is made fast in the lug of the blade nearer the knob-end of the screw. The other end travels freely through the lug of the opposite blade.



The threaded portion of the instrument is made quite long to insure easy working and to resist the twisting strain to which the blades are subjected. This, also, is a precaution against wear. The screw is made of hard steel, which contributes further to strength and durability. The mould of the outer aspect of the blades, slightly flaring at the extremity, makes the instrument self-retaining.

The instrument when in position rests upon the upper lip. In patients with mustaches, I have found a still further advantage to accrue from placing the screw and guide-rod below the blades. The mustache is thus held out of the way, in this way often sparing annoyance to the operator.

[1] St. Louis Courier of Medicine, July, 1879.

MEDICAL PROGRESS.

The Causes of Failure to Abort Syphilis by Excision of the Initial Lesion.—Excision of the chancre in the hope of aborting syphilis is an old procedure that has at times been quite extensively practised. It has, however, never gained a permanent foothold; of a total of about 460 cases on record, in only 106 have successful results been claimed. By far the larger number of syphilographers of to-day are opposed to the practice, but among the minority who still adhere to it is the learned syphilographer of Paris, JULLIEN, who, in a recent article based upon an extensive experience, says: "I believe in the possibility of interrupting or attenuating the course of syphilis at the time of the initial sclerosis; we should not fold our arms during the period in which a patient's existence is to be decided, or think that all is lost before anything has been commenced."

TAYLOR (*Medical Record*, 1891, No. 1078) has reported a series of cases illustrative of the inutility of

excision of the chancre. In one case, a minute papule was first observed twenty days after the patient had indulged in sexual intercourse with a syphilitic. The sore was touched with pure nitric acid, and the greatest care was exercised to secure thorough removal of the lesion without contaminating the adjacent healthy tissues. The wound healed kindly; yet, notwithstanding the precautions that had been taken, the inguinal ganglia were typically enlarged thirty days after operation, and twelve days later general syphilitic manifestations appeared. In the second case, a minute fissure appeared on the dorsum of the penis seventeen days after sexual intercourse with a syphilitic. A piece of skin including the fissure, measuring half an inch by three-quarters of an inch, was excised. Healing was uninterrupted, and the scar showed no induration; but, twenty days after the operation, there was well-marked inguinal adenopathy, and, subsequently, the usual secondary manifestations appeared. In the third case, an examination preliminary to the performance of circumcision revealed the presence, on the free border of the prepuce, of a small, brownish-red, not excoriated papule, about the size of the head of a small tack, which had appeared on the preceding day, two weeks after sexual intercourse. The operation was performed four days later. At this time there was no perceptible enlargement of the inguinal ganglia. As the prepuce was quite redundant, fully an inch and a half of tissue was removed; healing was prompt, without induration of the cicatrix. Thirteen days after the operation, inguinal adenopathy was quite evident. Thirty-two days later a typical roseola appeared; shortly before this, minute hard cords could be detected on the dorsum of the penis. On microscopic examination of the excised portion of the prepuce, there was found at the site of the initial lesion a small, superficial, and sharply-circumscribed ulcer, surrounded by almost normal skin, except that the peri-vascular spaces were distended with small round cells, and the endothelial cells lining the arteries and veins were swollen, and appeared to be proliferating. This cell-investment extended a considerable distance beyond the ulcer. This condition of the bloodvessels seems to show that when the primary sore is quite small and of only a few days' duration, syphilis is deeply rooted and, in all probability, has involved the vessels even before the appearance of the sore.

For comparative purposes, microscopic examination was made of a prepuce upon the lower part of which, near the frenum, was a typical hard chancre of ten days' duration. It was found that at a distance of fully an inch and a half from the chancre, the cell-changes around the vessels were very decided, the cells being in process of active proliferation. As an instance of the great rapidity of the syphilitic infection, reference is made to the now classical case reported by Berkeley-Hill, in which thorough cauterization of a lacerated frenum, within twelve hours after coitus, proved powerless to prevent the development of syphilis. As a further confirmation of the view that the process of infection in syphilis is from the beginning one of constant growth and diffusion, reference is made to the observations of Küleneff on the so-called lymphatic cord of syphilis. The cords were excised from the dorsum and sides of the penis in five cases, in which the chancres were of from a fortnight's to two months' duration. These cords were found to be dependent upon syphilitic endo-phlebitis and peri-phlebitis, the morbid process commencing primarily in the wall of the vein, probably in the inner coat. The tendency of the cell-infiltration to pass into young connective-tissue elements seems to indicate that the nature of the morbid process is identical with that of the initial syphilitic sclerosis; and, according to Küleneff, the development of this cord should be regarded as an early manifestation of vascular lesions in syphilitic patients.

In view of the facts, it seems probable that, contrary to the views heretofore held, in the first period of incubation, the infectious agent of syphilis is being rapidly diffused, instead of, as formerly supposed, smouldering in a cold and aphlegmasic manner in a sharply-limited area.

The Therapeutic Applications of Hydrogen Dioxide.—RICHARDSON (*Asclepiad*, 1891, viii, 32) gives a number of formulæ containing hydrogen dioxide, together with the indications for their employment. Each dose contains a little more than three drams of ten-volume hydrogen dioxide and a dram or two of pure glycerin and is made up to an ounce by the addition of distilled water. The dose should always be well diluted. For the colliquative sweating of pulmonary tuberculosis, fifteen minims of dilute sulphuric acid are added. When a tonic is desired, as in the course of influenza, a grain of quinine, with three or four minims of dilute hydrochloric acid, are added; if an anti-periodic is desired, five grains of quinine may be added. For hemoptysis and analogous forms of hemorrhage, fifteen grains of tannic acid, with or without sulphuric acid, may be added. In case of cough, preventing sleep, as in chronic and asthenic bronchitis and in pulmonary tuberculosis, an eighth or a quarter of a grain of morphine sulphate from three to five minims of dilute hydrochloric acid, and a dram of syrup of tolu are well added. In diabetes, it is useful to add a quarter or an eighth of a grain of codeine, a small proportion of a mineral acid, and a dram of alcohol. In cases of asthenia and anemia, the addition of ten minims of dilute phosphoric acid and of a grain or two of iron pyrophosphate, with the addition of from five to ten minims of tincture of digitalis, if the action of the heart is rapid and feeble, will prove serviceable. When indicated, ten minims of dilute phosphoric acid, a grain of quinine, and a grain or two of iron pyrophosphate may be added to the dose; a dram of alcohol and a thirty-second of strychnine may be additionally conjoined. The mere addition of half an ounce of alcohol makes a combination that may be usefully employed as an anti-spasmodic or as a menstruum for the administration of other substances that are soluble in alcohol and do not readily undergo decomposition in the presence of oxygen. Three or four minims of amyl nitrite may yet be profitably added. A dram of ozonic ether may sometimes be advantageously substituted for the hydrogen dioxide. Thirty minims of ozonic ether and a dram of syrup of tolu in glycerin and water are most effective in pertussis. The addition of a minim of creasote to the dose of hydrogen dioxide makes a useful antiseptic, deodorant, and anti-spasmodic, especially in fermentative dis-

orders of the stomach. For salivation, five minims of the solution of potassium arsenite may be added to the usual dose of hydrogen dioxide.

A gargle may be made of—

Tannic acid . . .	10 grains.
Pure glycerin . . .	1 ounce.
Alcohol	4 fluiddrams.
Distilled water . . .	4 fluidounces.
Solution of hydrogen dioxide (10 vol.) sufficient to make . .	8 fluidounces.

A useful collyrium may be prepared by combining:

Solution of hydrogen dioxide (10 vol.) . .	4 fluiddrams.
Pure tannic acid . .	5 grains.
Rose-water sufficient to make	8 fluidounces.

An evaporating lotion may be made of—

Alcohol	4 fluidounces.
Anhydrous ether . .	1 fluidounce.
Distilled water . .	4 fluidounces.
Solution of hydrogen dioxide (10 vol.) sufficient to make . . .	12 fluidounces.

For inunction of the skin in cases in which desquamation occurs, as in scarlatina, an ointment may be prepared by rubbing up ozonic ether with spermaceti ointment, so as to form a thin paste; this may, if desired, be rendered thick by the addition of more spermaceti, or thin by the addition of olive oil.

Dissecting Aneurism of the Ascending Aorta in Association with Chronic Nephritis; Rupture into the Pericardium.—At a meeting of the Berlin Society for Internal Medicine, TROJE (*Deutsche medicin. Wochenschr.*, 1891, No. 46, p. 1271) presented the specimens obtained from a woman fifty-six years of age who, four years previously, was seized with apoplectic symptoms from which she recovered. Three years later, the patient developed uremic coma in conjunction with symptoms of chronic nephritis, and was successfully treated. Some nine months before death, she again came under observation on account of increased dyspnea, sleeplessness, and edema. The physical signs indicated the existence of aortic incompetence and moderate hypertrophy of the heart. There existed, in addition, the symptoms of a chronic, diffuse nephritis. The radial arteries were tense and tortuous. The urine was subnormal in quantity and contained considerable albumin. There was also albuminuric retinitis. Death took place during a uremic attack attended with convulsions. At the autopsy, in addition to the evidences of cardiac hypertrophy and aortic insufficiency, an oblique rupture of the internal and middle coats of the aorta a short distance above the semilunar valves was found. Through the rupture a large volume of blood had found its way beneath the pericardium covering the great vessels and into the pericardial cavity, entirely enveloping the heart. The aorta was slightly thinned and dilated at the seat of rupture, but otherwise normal, although atheromatous beyond and behind. The coronary vessels were also atheromatous. The kidneys were contracted and contained cysts; the capsules were adherent; the surface of the organs was irregular; the cortex was diminished. The occurrence of dilatation, thinning, and rupture is made dependent upon the impact of the current of blood projected by an hypertrophied heart under conditions of increased arterial tension.

Puerperal Eclampsia.—In addition to seven cases previously reported, HERMAN (*Transactions of the Obstetrical Society of London*, 1891, xxxiii, 3, p. 315) reports five more cases of puerperal eclampsia, in which special attention was directed to observations of the temperature and of the urine. Four mothers died; eight recovered. Six living children were born; four died *in utero*; one was not viable; one patient died undelivered. There was no evident relation between the paroxysms and the temperature. The quantity of urine was diminished in all but two of the cases observed from the beginning of the disease. Of the two exceptional cases, one died; in the other, evidences of renal disease persisted after childbed. In all of the cases, the excretion of nitrogenous matter in the urine was absolutely diminished, and in most the percentage as well was diminished. At some time in all, the urine contained albumin in large quantity. In three, the proportion of albumin appeared to be increased in consequence of the paroxysms. Two cases in which the precipitate of albumin contained the largest proportion of paraglobulin recovered. Of three cases in which the proportion of paraglobulin was smaller than in the rest, two died; while in two the evidences of renal disease persisted. In all of the cases that recovered, there was rapid increase in the quantity of urine and in the proportion of contained nitrogenous matter and a diminution in the proportion of albumin. This restoration did not, as a rule, take place until some hours after the cessation of the attacks, and in the cases in which cessation of attacks preceded delivery, progressed more rapidly after delivery. This restoration of renal function failed to take place in the cases that died. Retinitis was present in only two cases, both of which terminated fatally.

Potassium Cantharidinate in the Treatment of Pulmonary Tuberculosis.—After the tentative employment of subcutaneous injections of potassium cantharidinate in sixteen cases of pulmonary tuberculosis in various stages of the disease, FENWICK and WELSFORD (*British Medical Journal*, No. 1617, p. 1349) conclude that the remedy is absolutely useless to produce any obvious beneficial effect. In moderate doses it is likely to give rise to albuminuria, or even hematuria, with strangury and pain in the loins.

Fatal Poisoning by Magnesium Sulphate.—SANG (*Lancet*, No. 3558, p. 1037) has reported the case of a woman, aged thirty-five years, that shortly after taking four ounces of magnesium sulphate dissolved in hot water, was seized with burning pain in the stomach and bowels, with difficulty of breathing and a sense of weakness in the extremities. The mucous membrane of the tongue and mouth was intact. There was neither nausea nor vomiting nor purging. Collapse set in and the patient died comatose. Death was ascribed to a direct action upon the cerebro-spinal system.

The Antiseptic Treatment of Burns.—In the treatment of burns, especially those that exceed the second degree, MAYLARD (*Glasgow Medical Journal*, 1892, xxxvii, 1) recommends that such clothing as can be conveniently removed be taken off; if adherent, it should be cut away. The wound is washed with a warm 1 : 2000 solution of mercuric chloride; then covered with perforated protective (oiled silk) that has been steeped in the mercuric solution; over this is placed a layer of borated lint wrung out of mercuric solution; finally, a covering of gutta-percha tissue is applied. The dressing is enveloped in sublimated "Gamgee" tissue and secured by means of a bandage. The dressing is to be renewed as soon as it becomes saturated with secretion. The protective may sometimes be omitted. The advantages claimed for this method of treatment are that the parts sterilized by the burn are kept sterile; inflammation is subdued and tissue-destruction prevented; discharge is diminished; dressings are infrequent and attended with little or no pain; there is an absence of offensive odor; necrotic tissue is rapidly thrown off by healthy granulations; the resulting cicatrix is the smallest possible; constitutional symptoms are reduced to a minimum.

A Swallowed Plate of False Teeth Passed by the Bowel.—ROSENZWEIG (*British Medical Journal*, No. 1614, p. 1204) has reported the case of a man who was awakened from an after-dinner nap by a sense of suffocation and pain in the throat, while a plate of false teeth that he had worn was missing. The throat was red and irritable, but no laceration or hemorrhage was detected. Solids and liquids could be swallowed freely and without pain. A sponge-probang passed readily into the stomach. The patient was directed to go to bed and to adopt a restricted diet. For three or four days there was considerable hypogastric pain, with alternate diarrhea and constipation. At the end of three weeks the patient would no longer remain in bed, and resumed his ordinary diet. Seven weeks subsequently to the accident, some time after a long drive, he was seized with severe abdominal pain, and after considerable difficulty and manual assistance the plate of teeth was passed *per anum*. The teeth were attached to a gold plate, the whole measuring 2¼ inches in its longest diameter, 1¼ inches in its shortest diameter, and ¼ of an inch in its greatest thickness.

Visceral Hemorrhages in Stillborn Children.—In an exhaustive paper, SPENCER (*Transactions of the Obstetrical Society of London*, 1891, xxxiii, 3, p. 203) presents an analysis of the findings in one hundred and thirty autopsies in children stillborn or dying shortly after birth. He found congestion or edema and hemorrhages in various viscera the rule. Hemorrhages were present in cases delivered naturally or by version or by forceps, through normal and abnormal pelves; in primiparæ and in multiparæ; with large and with small children; in easy and in difficult, and in rapid and in protracted labors. Hemorrhage was most common and most profound in children subjected to pressure in the birth-canal, or by instruments or by the hand of the attendant, especially when delivery was effected by a lower extremity. Cerebral hemorrhage was more frequently found in stillborn children delivered by the forceps than in those born by the breech, and in those delivered by the breech than in those born naturally by the head. Hemorrhage into other viscera was more common in labors in which the presentation was pelvic than in those in which the presentation was cephalic. The hemorrhage and the accompanying injury were, in many cases, the cause of stillbirth; when not immediately fatal, they were attended with the gravest consequences. The accident is to be avoided by preventing premature rupture of the membranes; by artificial dilatation of the birth-canal, when necessary; by restricting the employment of version and other artificial manipulations to urgent cases; and by preferring cephalic to podalic version in suitable cases. The employment of the forceps should be absolutely limited to cases in which there exists some pressing danger to mother or child; the forceps should never be employed merely to shorten the time of labor. In breech-presentation, examination of the genital organs of the child should be sedulously avoided during delivery. As soon as the lower extremities are born they should be wrapped in antiseptic wool (which keeps the child warm, prevents the grasping hand from slipping, and protects the parts from pressure). If traction be necessary, it should be made over wool wrapped around the child's limbs or pelvis; it should never be made by the hand surrounding the child's waist. In delivering the after-coming head, care should be taken that the sterno-mastoid muscles are not unduly stretched or compressed. When the after-coming head is in the pelvis, and there is even slight difficulty, the forceps should be resorted to.

Post-paludal Pneumonia.—HADJI-COSTA (*Revue de Médecine*, No. 11, 1891, p. 927) has recorded ten cases of pneumonia in individuals presenting a history of malarial infection. His observations lead him to believe that chronic impaludism predisposes to the development of a pneumonia characterized by a special train of symptoms. The invasion is usually insidious. The classical symptoms of a frank pneumonia, such as dyspnea and pain in the side, are mild or wanting. In addition to the chronic congestion of the miasmatic affection, organic and functional derangements of the abdominal organs are common. Nervous and adynamic symptoms predominate. Resolution is often delayed. Suppuration may ensue. The mortality is high. Treatment by means of quinine and alcohol exercises a most favorable influence upon the course of the disease.

Hemorrhagic Purpura, with a Tumor of the Thymus Gland.—NASON (*British Medical Journal*, No. 1617, p. 1352) has reported the case of an adult male who presented epistaxis, hematuria, and a purpuric eruption; death took place in coma. At the autopsy, in addition to extravasations of blood in many superficial and deep structures, a large extravasation was found occupying the right frontal lobe of the cerebrum. Numerous small hemorrhages were found in other parts of the brain. In the upper portion of the mediastinum was found a large lympho-sarcoma occupying the site of the thymus gland. A possible relation is suggested between the lymphoid cells supplied to the circulation by the thymic tissue and the development of purpura.

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OF MEDICAL SCIENCE.

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SATURDAY, FEBRUARY 6, 1892.

DUTIES OF THE YOUNG PRACTITIONER.

THE young practitioner, settling in the larger towns and in cities, first of all desires to secure a practice; he wishes, so soon as possible, professional success. How shall he attain it in the best and most enduring form? Let us leave out of consideration practice in the country, where the aspects of the problem are somewhat *sui generis*, and let us also suppose that the young physician has been properly educated, and has an adequate intellectual equipment for his calling. It also goes without saying that, though perhaps a little slow in coming, success will more certainly come to the gentleman—the man who is respectful, self-respecting, well-bred—than to one not a gentleman. The commonest patient at once recognizes the boor turned doctor, while the most vulgar reverence gentle strength in their physician, and therefore give him confidence—and calls.

But to himself, his colleagues, and associates, and to his profession, what are some of the chief duties of the young practitioner?

First and foremost, that he make haste slowly; that he be content to wait. Many, even most of the present professional evils that bring disgrace upon physicians and their calling are due to the feverish desire for quick success. Policy aside, it is one of the duties and glories of our work to administer rebuke to the world, the rule of which is *Success at any cost*, by duty quietly done and self-renunciation habitually performed in the interest of humanity and of dignity. The desire to get on, the need of money, the wish to reap reward for the long years of study and hope deferred, are powerful motives, and must be allowed their legitimate and proper sway. It is hard to act upon the evident truisms that the best fruits ripen slowly; that deserving somehow and almost always gets its desert; that slow success is usually far better than quick success. The last point is especially true in view of the fact that the young physician should have much leisure for needed study, for filling the blanks in his knowledge, for thoroughly examining and deepening his comprehension of every case of disease that comes under his care.

Too much haste, for example, leads him to adopt the vile methods of advertising that have often besmirched honor and blocked the way to enduring and deserved success. Let him beware of the daily paper and of the reporters. These gentlemen detect at a glance whether one wishes sneakingly to advertise or not. If one determinedly and absolutely refuses them the privilege of using his name about professional opinions, his surgical operations and cures, they dare not disobey. We all know that the physicians whose surgery and skill are heralded in the penny press, are so advertised by their own will and doing, and quite as well do we know that the act and fact, however much money it brings, brings also dishonor and the contempt of one's professional fellows. It is poor policy in the long run.

The young physician in a city will probably seek connection with the out-patient department of some hospital or dispensary. But, for Heaven's sake, don't let him start a new institution of this kind! We are developing a genuine hospitalomania. The need of hospitals was at one time so great that, satisfaction long since attained, the historic momentum goes on with blind fury to self-destruction. The desire of the young practitioner for patients and experience drives him into this field—the abuse of which is his own professional suicide. If the older visiting physicians will not coöperate to limit the abuse, let him seek to do it himself. The way out is not to treat the poor out-patient hospital visitor brutally and ungently, and the well-to-do patients (at present a large and increasing proportion) with an assumed and interested politeness, teasing them

to the private office on shallow pretexts. There can be no doubt that the crowds of out-patients that now have to be treated in an hour or two leads to diagnostic and therapeutic negligence that does patient and doctor each an injury. The evil must and will be remedied. Better that it be remedied soon and spontaneously than when it becomes a public scandal. Let no treatment be given when there is a reasonable belief that the patient can pay a small fee outside.

It is of the utmost importance that the young practitioner do not make the mistake of consorting and consulting with quacks. When quackery, as in homeopathic practice, is semi-fashionable, and some medical hybrid, occupying a doubtful position, wishes to bolster himself by the help of a regular practitioner, it is a great temptation to the younger man to accept the bribe. But there is no surer way to damage reputation and block professional advancement. Despairing pessimists and their natural but unknown allies, the quacks, may declaim that medical ethics have gone to the dogs and all that, but it is not so. If medical ethics have "gone to seed," then it is because the process of going to seed is preliminary and necessary to planting, and it conforms to the enthusiasm and function of the young to plant the seed, not to intone dirges. The seed needs soil; a little medical market-gardening and manuring will bring a new crop. It is not true that medicine is a business or only a business. Those that say so are stock-brokers and politicians turned physicians, and showing the cloven hoof of their ancestry. They will some day find a rude awakening from the shallow dream.

A very helpful condition of success is a good outfit of instruments, chosen with care, and especially with the advice of some older physician.

Not less necessary is a good reference library of new and authoritative medical books. A most needed and noble foundation would be a charity-fund to supply deserving young graduates with cyclopedias and standard treatises that epitomize modern medical science and research. The consultation of such works would often illumine an obscure case, obviate accidents and mistakes, save life, and be a daily means of professional progress and success.

Two, three, or more standard representative medical journals should also be subscribed for. No physician should be without either *The Lancet* or *The British Medical Journal*, and of our own country's journals, *The New York Medical Journal* or *The Boston Medical and Surgical Journal*, etc., should be taken. An excellent plan is to form journal and magazine clubs whereby at a minimum of expense, a large number of weekly and monthly journals may be passed among the club members. But in choosing journals those should be rejected that by reading notices and "puffs" of proprietary preparations and nostrums show that they are the mere agents of advertisers; and those that by silence as to quackery and medical abuses prove that it is not medicine but the growth of their subscription-lists and the sale of books that are the concealed motives of editor and publisher.

Finally, it may be urged that the young practitioner should continuously seek the advice and even the tutelage of the wiser and more experienced, long-established practitioner. Cases will be encountered that will puzzle the mind of the young practitioner or will baffle his skill. The practice of frequent consultations is eminently wise and greatly to be advised. It is to the advantage both of the patient and of the physician. It leads to a surer progress in the young, encourages a very desirable, much-needed professional *esprit de corps*, and makes medical progress more steady and assured. A condition, however, is that consultation fees shall be lowered. It is neither just to the patient, nor wise as a part of professional policy, greatly to increase the expense of dual advice. There is no reason why a consultation fee should be double or treble the customary fee; rather should it be less. But in this we trench upon another aspect of the question—the duties of the elder to the younger practitioners—left for future consideration.

THE PAN-AMERICAN MEDICAL CONGRESS.

THE Pan-American Medical Congress that will assemble in Washington in the first week of September, 1893, will, in all respects, be an occurrence of extreme interest and importance to the medical profession of the United States, and of all the countries associated in the movement. It is fortunate that a period has been chosen that will in no way conflict with the meeting of the International Congress at Rome, in the same year. From the latest authentic information as to its exact date, the latter meeting will occur in the last week of September. This is, indeed, quite as early a date as would commend itself for a large meeting in Rome. It will enable those that desire to attend both of these congresses, and to visit the World's Fair at Chicago,

which promises to be of so much interest and importance, to do so without difficulty, whether they come to this country from Europe, or from one of the South American countries, or are members of the profession in the United States. For the physician and scientist we believe the World's Fair will be found to have more importance than any previous similar exhibition.

It is evidently in the interest of the Congress that it should be held in the City of Washington. Careful examination of the Meteorological Reports show that the first week of September is usually more cool and agreeable than later in that month. Experience has shown also, we believe, that large scientific meetings occurring in any city where a World's Fair is in operation lose much of their importance and success by being dwarfed in comparison with the great exhibition.

It seems to us of undoubted importance that the entire profession of the United States should co-operate in rendering this Congress as successful as possible. Our interest in the International Congress is, of course, genuine, but it is exclusively from a scientific standpoint. We confidently expect that when next the International Congress comes to this country it will achieve a success as brilliant as any it has yet attained; but the Pan-American Congress appeals to us not only from the scientific standpoint, but also because it holds out distinct prospects of the most important results following from closer relations of reciprocity between the various countries that will be represented in it. It is most desirable that closer relations shall be formed between the members] of the medical profession throughout the entire American continent.

It is true that in the past a comparatively small number of students have come to our leading schools from the South American countries or from Canada. We believe this has been largely because the standard required in our schools and the facilities and equipment provided have not been such as to commend themselves in contrast with the schools of Europe and Great Britain. But, fortunately, just at this time it has been decided that a compulsory four years' course of medical study shall be required at a number of our leading schools, and important improvements also are being made in all the facilities for instruction. There can be little doubt that, if the Pan-American Medical Congress is made as great a success as it should be, all the great schools, from New York to Illinois, will derive valuable results in the form of steadily increasing numbers of desirable students from Canada and the South American countries.

THE CHARLATAN TURNS PHILANTHROPIST.

AN interesting but very old psychologic phenomenon consists in the desire of those suddenly obtaining undeserved power to be over-kind and unduly generous. The efforts of the *nouveaux riches* at alms-giving and public benefaction are generally comical and often farcical. It is the foible of the place-hunter elevated to unaccustomed office to endow his cronies with favors. When the subconsciousness of trickery and secret evil becomes so troublesome as to make the poor wretch incapable of sitting still on a chair, however ludicrous to others, there is no more natural method of settling accounts with the duped public than to graciously divide plunder with it. And while the poor democratic beast bellows, Hurrah! at the supposed generosity, the scamp laughs in his sleeve at his success in the triple scheme of extended advertising, popular applause, and conscience stifled by posing as a public benefactor.

It one day popped into the fancy of an erratic English magazine-writer and literary pyrotechnist that there was a chance to give his dear public "a new thrill," by the espousal of the cause of an Italian quack—one MATTEI—who, without any preliminary medical education or pathologic study, assured the world that he could cure carcinoma. MR. STEAD gave the "Count" the service of his dashing pen, and advertised him as splendidly as if all the other zodiacal constellations had been darkened in the heavens, leaving there only the single glory of Cancer. MR. STEAD now informs his readers that the Count offers to make over to charitable objects the net profits accruing from the sale of his "great remedies" in the English-speaking world. MR. STEAD *is to nominate the committee that will dispose of the money.*

From a Western religious paper we learn that, spurred by the very pertinent inquiry as to what he proposed to do for the gutter drunkard (who for good reasons could not pay him one hundred dollars for treatment), KEELEY answered with a proposition to buy the Washingtonian Home in Chicago (for the rehabilitation of drunkards) and carry on the institution according to his own methods.

Before accepting such propositions, the trustees

should read either FROUDE's instructive essay, *A Cagliostro of the Second Century*, the history of PERKINS's tractors, of "Actina," or of any one of a thousand similar "wonders and delusions of a day."

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 21, 1892.

DR. ALFRED L. LOOMIS, PRESIDENT, IN THE CHAIR.

THE CONTAGIOUSNESS OF TUBERCULOSIS: PROPHYLAXIS.

THE last stated meeting of the Academy of Medicine was devoted to a consideration of the contagiousness of tuberculosis, and of the methods that might be most reasonably urged and adopted by the medical profession with the object of limiting the spread of the disease.

DR. T. MITCHELL PRUDDEN opened the discussion with a paper on "The Elements of Contagion in Tuberculosis." He defined the word "contagion" as an "invasion and reproduction within the body of pathogenic microörganisms." It was not necessarily an invasion by *bacteria*, because other organisms may be the elements of contagion, as, for instance, in malaria. It was encouraging to note that the word "contagious" no longer refers to infinite possibilities in the unknown, for the contagium in an infectious disease is the particular pathogenic microörganism itself the advent of which in the body ushers in those reactions of the body-cells that we call the disease; and an infectious disease is *contagious* when, under the ordinary conditions of life, the contagium can be freed from the body of a diseased person, and be conveyed to the body of another in such a condition as to be able to reproduce the disease in this second individual. Hence the old distinction between contagion and infection has become impracticable and valueless, as it is now known that the communicability of an infectious disease is largely dependent upon the physical properties of the contagia, which determine the manner in which the contagia are spread from body to body, or from place to place. The common conception of a contagious disease is one that taints the atmosphere surrounding the patient, but this is now true of any of the ordinary diseases except the exanthemata. Thus, typhoid fever, diphtheria, and tuberculosis may be highly contagious, or slightly contagious, depending upon the care, or lack of care, taken in disposing of the exudates and discharges of the sick.

Dr. Prudden closed his paper with the remark that whatever public or private measures for the prevention of tuberculosis we decide are wise to adopt, they must be so conceived that education may go hand in hand with the law, and that for humanity's sake, those stricken with the disease must be made to know that the necessary measures of reform do not entail ostracism or isolation. We must, with much tact, and a large knowledge of the ways of the world outside of the laboratory, wisely and cautiously select the appropriate measures, not forgetting that death meanwhile holds carnival.

DR. EDWARD G. JANEWAY then discussed "The Necessity and Feasibility of Efforts to Prevent the Spread of Pulmonary Tuberculosis." He said that surgical literature, prior to the discovery of the tubercle-bacillus, shows that many intelligent observers had been forced to admit that the disease was at times spread from one person to another. To-day there are few that do not believe that the tubercle-bacillus is the cause of tuberculosis, and this belief necessarily brings with it a belief in the doctrine of the contagiousness of the disease. As an instance of the contagiousness of tuberculosis, he cited a case occurring in a family that had been free from such disease. A child, two months of age, was kissed by a visitor who was suffering at the time from pulmonary tuberculosis, with cavities in the lungs and bacilli in the sputum. The child became infected with tuberculosis of the mediastinal glands, pulmonary tuberculosis rapidly supervened, and death occurred two months later. Dr. Janeway thought that every physician could recall cases illustrating the contagious nature of the disease, yet few such cases were reported, partly, no doubt, on account of the attitude of mind of the observer, and partly from lack of time to investigate every detail bearing upon the etiology of the cases. He adduced statistics to show that the great majority of people having pulmonary tuberculosis were at an age when they were most apt to mingle with others, either while at work or at play. The statistics also showed the baneful influence of a concentration of population. Dr. Janeway looked forward with dread to the injurious effects that must follow, if the density of the population of New York City is allowed to increase at the present rate. If the medical profession only believes that the tubercle-bacilli *probably* bear a causal relation to tuberculosis, it still cannot afford to neglect measures that will destroy these germs, or prevent their dissemination. He therefore suggested (1) that each physician should lay down, for the management of individual cases, such rules as receive the sanction of those best informed on the subject; (2) that it should be the duty of every physician to report all cases of tuberculosis coming under his care to a central authority, which would then issue printed rules for the information of those attending these patients; and (3) that inspectors should be employed to inform and instruct the patients and their friends as to the manner in which the proposed measures were to be carried out. A combination of the first two indications was all that could be attempted at the present time. The rules referred to should call attention to the proper manner of disposing of the sputum and other discharges, the necessity of cleanliness of the mouth, and particularly in regard to the manner of expectorating, and the mode of protecting those parts of the bedding that are most likely to become soiled by the discharges. The rules should also point out the danger of healthy persons occupying the same room with the sick, the manner in which this room should be cared for when the patient is in the later stages of the disease, and how it should be purified after the patient has left it. Special attention should be directed to the manner of conducting health-resorts, so that healthy persons, and particularly persons convalescing from other diseases, should not be given rooms recently occupied by tuberculous patients. Proprietors of such resorts should be required to adopt adequate measures for disinfecting the rooms and the bedding, and to provide properly kept receptacles for the sputum.

In the absence of DR. JOHN S. BILLINGS, his paper on "The Prevalence of Consumption in the United States" was read by H. D. CHAPIN. By statistics it was shown that the annual death-rate from pulmonary tuberculosis for the census year ending June, 1890, was as follows in those States in which registration of deaths is the most complete: Connecticut, 2.34; District of Columbia, 3.59; Massachusetts, 2.67; New Jersey, 2.34; New York, 2.48; and Rhode Island, 2.66. From these figures it seems perfectly fair to assume that the number of deaths from pulmonary tuberculosis in the census year was over 125,000. For the six years ending May, 1890, the average annual death-rate from pulmonary tuberculosis was: In New York, 3.92; in Brooklyn, 2.98; in Boston, 3.86; and in Philadelphia 2.98; while in New York State, excluding New York City and Brooklyn, it was 1.81; and in Massachusetts, excluding Boston, it was 2.40. The influence of aggregation on the mortality from the disease is well marked. Estimating the average duration of pulmonary tuberculosis to be two years, he calculated that the number of cases of the disease actually existing at one time in New York City was 11,000; in Brooklyn, 4,000; and in the rest of the State, 13,000. Those localities that are especially frequented by the criminal and vicious classes are common centers of infection, and on this account the court-rooms are the most dangerous places, as they are crowded with this class of people, and the rooms are never effectually cleansed. Fortunately, however, these are just the places in which stringent prophylactic measures could be most authoritatively enforced. The medical profession should point out the necessity of providing in these places proper receptacles for sputum, and should direct that the rooms should not be swept while dry, but that the dirt should be gathered up with wet rags, and the floors cleansed with some disinfectant solution.

DR. ABRAHAM JACOBI said that as infants are usually infected with tuberculosis from external sources, it behooves the medical attendants to endeavor to secure a prompt cure of eczema, sore-throat, and catarrh, not only of the nasal passages and pharynx, but of the intestinal tract, and in this way minimize the chances of the tubercle-bacilli entering the system. Lesions of the bones, and particularly of the glands, should not be neglected, for a cervical adenitis is not infrequently the starting-point of a tuberculosis of the mediastinal glands. It should not be forgotten that one very likely source of infection in infants is the use of unboiled milk for their food.

DR. J. WEST ROOSEVELT thought the profession would accomplish much if it only succeeded in teaching the public the importance of simple cleanliness, and as an important step in this direction, the public should be instructed in the "art of spitting."

DR. A. H. SMITH thought that the public mind would best grasp the significance of the points brought out in this discussion, if it were made to understand that the two principal factors in the development of tuberculosis were the "seed" and the "soil;" and that although measures to limit the spread of the seed are important, they are no more important than efforts directed against the preparation of a favorable soil. The people should be made to understand that every habit of life that tends to depress the vitality is a factor in the formation of a suitable soil for the tubercle-bacilli. He had been impressed with the fact that in the rural districts where, at first glance, the surroundings seem most healthful, whole families would at times become victims of tuberculosis, and this susceptibility could only be explained by their conventional disregard of cleanliness and ventilation. Court-rooms may furnish a suitable place for the development of tuberculosis, but a still more fertile source is to be found in the post-offices in any large town. A post-office is one of the dirtiest places imaginable, and if, in addition to this, one or more of the large force of employés are victims of pulmonary tuberculosis, the mingling of their sputum with this dust exposes the other workmen to great danger of infection.

DR. C. G. CURRIER said that from a review of the literature of the past few years, he concluded that it is probable that heredity still plays a real and important part in the causation of pulmonary tuberculosis apart from predisposition. Although infants spend most of their time crawling about the floor, and are in this way especially exposed to inhalation of tuberculous dust, experience shows that tuberculous infection in infants most commonly starts in the glands, bones, or in the intestinal tract. Again, it is very rare for a husband to acquire the disease from a wife, or *vice versa*. Of 275 nurses that had been exposed to infection of tuberculosis, only two had acquired the disease in a period of twelve years.

DR. LAURENCE JOHNSON said that it had been proposed to put tuberculosis on the list of contagious diseases to be reported to the Board of Health. This would be unwise, for every physician knows what incalculable harm is likely to result to patients in the first stage of the disease from depriving them of that most important factor in therapeutics—hope. It has become firmly fixed in the minds of the masses, that pulmonary tuberculosis is a *hopeless* disease; while much has been done in recent years to shake this belief, but little effect has been produced except on the more intelligent classes.

DR. A. SEIBERT stated that he was much impressed by the case in which the infection had occurred from kissing, and expressed the hope that something would be done to break off this silly habit of kissing, which is so common among school-girls. It was perhaps significant that, in his experience, scarlet fever, diphtheria, and tuberculosis had developed much more frequently in girls than in boys.

THE PRESIDENT, in closing the discussion, said that it was the imperative duty of the Academy to instruct the public concerning the contagiousness of tuberculosis, and particularly in regard to the degree of contagiousness. Last summer a lady standing on the steps of Paul Smith's hotel was heard to say that she was glad she was so many miles away from the Adirondack Sanitarium, as she felt she was not so liable to develop tuberculosis. This remark shows that it is not enough to simply state the mere fact that the disease is contagious. Cleanliness is the keynote of the measures that had been advocated, and, in his opinion, it was the nasty American habit of expectoration that was largely responsible for the terrible ravages of the disease among us.

The Second International Congress of Dermatology will be held at Vienna from September 5 to 10, 1892, under the presidency of Kaposi.

CORRESPONDENCE.

CHICAGO.

The Illinois State Board of Health—Revocation of State Certificates—Railroad Transportation of the Dead —Typhoid Fever in Chicago, and its Relation to the World's Fair—Sanitary Work of the Police.

THE fifteenth annual meeting of the Illinois State Board of Health was held January 28th in the Capitol building at Springfield. Present: Dr. W. A. Haskell, of Alton, President; Dr. R. Ludlam, of Chicago; Dr. H. Williams, of Chicago; Dr. Griffith, of Springfield; Dr. W. F. Reilly, of Chicago, Secretary.

Among the matters of general interest upon which the Board took action was the revocation of State certificate No. 9490, issued January 30, 1890, to Dr. Samuel E. McCreary, then of Davenport, Iowa, subsequently of Peoria, Ill., and other places, and now advertising as having "permanently located" at Toledo. State certificate No. 8219, originally issued to Charles Rohning, M.D., of Brussels, Calhoun County, Ill., April 21, 1888, was also revoked on proof of Dr. Rohning's decease, and of the further fact that said certificate is in the fraudulent possession of Philip Simons, under indictment by the Grand Jury of Calhoun County for forgery and perjury, and who has been practising medicine under said State certificate.

The rules of the Board concerning transportation of the dead by railway or other public conveyance were revised so as to transfer corpses of those dead from diphtheria to the category of "absolutely forbidden." A number of cases where the transportation of diphtheria corpses had introduced the disease and caused fatal and widespread outbreaks, were reported by the Secretary as the cause for the act.

The following resolution by Dr. Haskell was unanimously adopted:

Resolved, That the position of special sanitary counsel to the Illinois State Board of Health be tendered to Dr. John H. Rauch, of Chicago, and that upon his acceptance of the position he be requested to make an investigation of the recent charge that Chicago is suffering from an epidemic of typhoid (enteric) fever due to a polluted water-supply; and, in view of the widespread publicity of said charges and their probably damaging influence upon the World's Columbian Exposition, the utmost expedition consistent with thorough investigation is urged.

The charge referred to in the above resolution was made by Professor William T. Sedgwick and Mr. Allen Hazen in a paper recently read before the Massachusetts Institute of Technology in Boston, from which we clip the following extracts:

"In the city of Chicago there has been for many years a large amount of typhoid fever. It was abundant, for example, in 1872, 1881, 1885, and in 1886. Between 1886 and 1890, however, it was less common; but in 1890 the death-rate from typhoid fever suddenly rose to a height almost exactly the same as that reached by Philadelphia in 1876, namely, 9.16 deaths per 10,000 of inhabitants and 4.16 per cent. of all deaths that occurred in that year. The actual number of deaths in Chicago in 1890 from typhoid fever was 1008. During the year just ended Chicago has reported 1977 deaths from typhoid fever, giving the prodigious death-rate for this disease of 16.64 per 10,000 of population and a percentage of all deaths of 7.19.

"In the month of May alone there were 408 deaths from typhoid fever. This number is more than one-fourth as great as the entire number of deaths from this disease the year before in the whole State of New York, containing 6,000,000 inhabitants. In the single month of May, 1891, there were more deaths from this disease in the city of Chicago than in the city of New York during the whole twelve months of 1888, 1889, 1890, or 1891. In 1891 there were 385 more deaths from typhoid fever in Chicago than in the previous year in the whole State of New York, with five times the population, and nearly 1400 more deaths than in London with three and one-half times the population of Chicago.

"The whole number of deaths from typhoid fever in Chicago in 1891 was 1997. Multiplying this number by ten, we have an approximate estimate of the whole number of persons affected by this disease. These extraordinary figures can scarcely be surpassed or even maintained in 1892 or 1893, but they must be a source of constant anxiety to the citizens, as they certainly are a menace to the sanitary success of the World's Fair.

"We copy from the official report of the Department of Health of the city of Chicago that typhoid fever was exceedingly prevalent in Chicago in 1872. We cannot agree with the author of the statement in the annual report of 1872 that, although the overcrowding and barrack-life incident to the months following the great fire in October, 1871, 'brought its legitimate result in an increased death-rate, yet during the year no epidemic existed.' The death-rate from this disease and its percentage of mortality to the total mortality were greater than have ever been since that time until the present epidemic had developed. After 1872 there was a marked improvement until 1879, when there was a slight increase, followed by a great increase in 1881. The fever subsided until 1885, when there was another marked increase, followed by a decrease in 1886, 1887, and 1888.

"In 1889 a rise began which attained the proportion of an epidemic in 1890, and reached the great height already referred to in 1891. It will be noticed that the epidemic in 1872 fell off very rapidly in 1873. That of 1881 declined much more slowly; that of 1885 more slowly still, so that unless some special effort is made to hasten the decline of the present epidemic, there is reason to fear that typhoid fever may continue to be very prevalent in Chicago in 1892–93.

"In the next place we may inquire whether, on the whole, typhoid fever has been increasing or decreasing in Chicago. An examination will show that for the eleven years, 1881–91, it has been much higher than for the preceding eleven years, and even omitting 1891, typhoid fever has, on the whole, gained ground in Chicago since 1880. This is true even if both 1890 and 1891 are omitted.

"The conclusion is inevitable that typhoid fever has, on the whole, materially increased in Chicago since 1880; while within the last two years it has risen to an extraordinary height. We may next inquire how Chicago

compares with other cities in respect to mortality from typhoid fever.

"The death-rate from typhoid fever of all the cities of Massachusetts, twenty-eight in number, for the twelve years 1878–89, was 4.62; that of Chicago during the same period was 5.85; that of Boston, 4.32; Worcester, Cambridge, and Lynn, 3.91. The averages for the whole State of New York, for the six years 1885–90, is 1.38. The average percentage for the city of Chicago during the same period was 3.27.

"From these facts it appears that typhoid fever has long been excessively prevalent in Chicago, and we have already shown that it is, on the whole, increasing, while within the last two years it has risen to extraordinary proportions.

"In a paper of this character we do not properly consider the causes of these facts. Nor would it be proper to attempt to analyze causes, but since it is now held by sanitary experts that the water-supply is the chief means of spreading typhoid fever, we may be permitted to look into the drainage and water-supply of Chicago. In the Board of Health reports of 1883–4, Commissioner of Health De Wolf, says: 'There can be no question but that the stream of filth coming through the city is a constant menace to the health of the citizens.'"

In view of all these facts the authors urge that active measures be taken to improve the sanitary condition of Chicago before the opening of the World's Fair.

At the afternoon session of the Board the following officers were elected for the ensuing year: Dr. W. A. Haskell, *President;* Dr. F. W. Reilly, *Secretary;* Dr. A. L. Clark, *Treasurer;* Drs. W. R. McKenzie and D. H. Williams, *Auditing Committee.*

Our City Health Commissioner, Dr. Ware, has publicly testified to the general worthlessness of the city's sanitary officers and incidentally commended the work of policemen as special sanitary officers.

Dr. Ware's testimony proves the importance of what the daily press has frequently urged, viz., that patrolmen on regular beats should be *ex-officio* sanitary officers. Especially in the residence districts should the police be charged with a general supervision of the thoroughness of cleaning alleys and streets. Such labor and the reporting of delinquents to headquarters would not be an irksome addition to a patrolman's duties and many would hail it as a relief from idleness.

A single policeman's badge of authority is often worth more than a dozen special "inspectors." The police force has habitually looked the other way, even in cases of flagrant violations of health ordinances, since public sanitation was intrusted to "inspectors."

It would be better to change the system entirely and give the police *carte-blanche* to enforce alley-cleaning regulations. The work would then be effectively done.

A FORM OF FELT JACKET.

To the Editor of THE MEDICAL NEWS,

SIR: The article in your issue of January 16, 1892, entitled, "Injury to the Spine: Invention and Application of a Paper Jacket," has prompted me to bring to your notice a form of jacket that I have been using for some time. In every instance I find it preferable to the plaster jacket, as it combines elasticity, firmness, and light weight.

I have had occasion to use plaster a great deal, and I believe that practice has enabled me to produce as light and rigid a jacket as it is possible to make, but I was led to search for something that was suitable alike to the infant and adult. This I found perfectly supplied in the adaptable porous felt, such as is ordinarily used for splints. The method of application is simple, and eminently satisfactory. An accurate mould of the body is taken by means of the plaster-of-Paris jacket, the patient being suspended. Before the plaster is entirely set, the cast is cut open in front. In this mould, a cast of the body is taken and allowed to harden. A piece of felt of suitable size is dipped in very hot water for a moment and quickly applied to the cast, and after having been gently beaten and pressed so as to conform to every line of the cast, is firmly held in place with muslin rollers and allowed to harden. This usually occurs within forty-eight hours. In this manner an exact mould is reproduced, showing every bony and muscular prominence. After trimming to fit, the spaces about the arms and hips being cut out, eyelets and laces are provided, and the jacket applied to the person during suspension.

The weight of the jacket is almost *nil.* It is firm and elastic. It is soft and porous, and fulfils every requirement of a spinal support.

To this cast may be added any form of apparatus that may be desired to give further spinal support or suspension. It may be readily reinforced by light steel strips, riveted to the sides. It may also be perforated, to give further lightness and ventilation.

While I do not claim any originality in introducing this form of jacket, I have not seen it used by anyone previous to the time that I first used it. Indeed, I have not seen this form of cast made use of by anyone, but was driven to search for something more suitable than plaster for infants and very young subjects who could not bear the weight of plaster, and in experimenting with various substances found this one to fulfil every requirement. As there is no special skill nor any particular tools required, the physician can at once see the advantages that this material possesses over any that is now in use.

I am confident that it is superior to any other material now in use, as it will stand any amount of rough usage; will not chip, break, or be bent out of shape.

The entire process is so simple, so readily performed, and gives such an inexpensive and satisfactory jacket, that I deem it worthy of your readers' attention.

CHARLES H. MERZ, M.D.

SANDUSKY, O., January 18, 1892.

NEWS ITEMS.

The Pan-American Medical Congress in the United States of Colombia.—Pursuant to nominations by Dr. Pedro M. Ibañez, of Bogota, member of the International Executive Committee for the United States of Colombia, the following organization of the Pan-American Medical Congress has been effected in that country: Vice-President, Dr. Pio Rengifo, New York. Secretaries of Sections—General Medicine, Dr. Ignacio Gutierrez Ponce,

Paris; General Surgery, Dr. Rafael Rocha Castilla, Bogota; Military Medicine and Surgery, Dr. Abraham Aparicio, Bogota; Obstetrics, Dr. Joaquin Maldonado, Bogota; Gynecology and Abdominal Surgery, Dr. Jose M. Buendia, Bogota; Therapeutics, Dr. Manuel Plata Azuero, Guaduas; Anatomy, Dr. Juan D. Herrara, Bogota; Physiology, Dr. Antonio Bargas Vega, Bogota; Pathology, Dr. Nicolas Osorio, Bogota; Diseases of Children, Dr. Antonio Gomez Calvo, Bogota; Ophthalmology, Dr. Proto Gomez, Bogota; Laryngology and Rhinology, Dr. Luis Fonnegra, Bogota; Otology, Dr. Carlos Esguerra, Bogota; Dermatology, Dr. Daniel E. Coronado, Bogota; Orthopedics, Dr. Juan E. Manrigue, Bogota; Naval Hygiene and Quarantine, Gabriel I. Castaneda, Bogota; General Hygiene and Demography, ——; Mental and Nervous Diseases, Dr. Pablo Garcia Medina, Bogota; Oral and Dental Surgery, Dr. Guillermo Vargas Paredes, Bogota; Medical Pedagogics, Dr. Jorge Vargas, Bogota; Medical Jurisprudence, Dr. Leoncio Barreta, Bogota; Auxiliary Committee (each member being the official representative of the Congress in his respective city), Dr. Nicolas Osorio, Dr. Andres Posada Arango, Dr. Jorge E. Delgado, Dr. Eugenio de la Hoz, Dr. Domingo Cagiao, Dr. Jose Manuel Rodrigues, Dr. Paulo Emilio Villar, Dr. Felix M. Hernandez, Dr. Rafael Calvo, Dr. N. Ribon, Dr. Nilceades Castro, Dr. Cayetano Lombana, Dr. Jose M. Martinez, Dr. Isaias Saavedra, Dr. Severo Forres, Dr. N. Villa, Dr. Evaristo Garcia, Dr. Miguel Caicedo, Dr. Emilio Villamizar.

The following medical societies have been elected as auxiliaries of the Congress, viz., Academia Nacional de Medicina, Academia de Medicina de Medellín, Sociedad de Medicina del Cauca.

The following medical journals have been designated as official organs of the Congress, viz., *Revista Médica*, Bogota; *Revista de Higiene*, Bogota; *El Agricutor*, Bogota; *Boletin de Medicina del Cauca*, Calá; *Anales de la Academia de Medicina de Medellín*, Medellín.

Medical Education in Turkey.—There are five medical schools in the Turkish Empire—one at Constantinople, one at Cairo, one at Aintab in Northern Syria, and two at Beyrout, one of the latter being Protestant and the other Roman Catholic. Only the Constantinople and Cairo institutions possess the right of granting licenses to practise; the other three, which are in the hands of missionaries, can only give certificates of study, candidates having to go to Constantinople to be examined. A diploma conferred by the Cairo school gives only the right to practise in Egypt; if a physician who has obtained a diploma at Cairo wishes to practise in other parts of the Turkish Empire, he must pass a further examination at Constantinople. The medical school of Constantinople was founded in 1883, and until now has educated some 1400 practitioners. The teaching staff comprises twenty professors, and the curriculum is of six years. The Protestant medical school of Beyrout has been in existence about twenty-two years, during which time it has educated 105 practitioners. There are six professors, and the length of the curriculum is four years. The other two schools are organized on a similar basis.

Professor A. Richet, a distinguished French surgeon, died recently in his seventy-sixth year.

Obituary.—Dr. Harmon W. Shove, of Woodbury, Conn., died of pneumonia, on January 23d, at the age of sixty-nine years. He was one of the most prominent practitioners in the section in which he lived. Dr. Shove was graduated from the Yale Medical College in 1853, and at once entered upon the practice of his profession at Woodbury. By his studious habits and almost unlimited capacity for work, he was, after nearly forty years of active service, still in the full and successful practice of his profession, which, by his unblemished life and dignity of character he helped to advance and elevate.

The Prevention of Adulteration in Russia.—A municipal institute for the analysis of food and drink has been opened at St. Petersburg. Rough qualitative analyses of milk, butter, bread, wine, beer, etc., will be made gratuitously for the public; but for more elaborate examinations of these substances, and of water, flesh suspected of trichinosis, preserved meats, etc., the payment of fees will be required.

The Correction of Prostitution.—An association has recently been founded at Budapest with the objects of combating the evils of prostitution, of redeeming its victims, and of establishing and maintaining a free dispensary for the treatment of poor patients suffering from venereal disease.

Matthew Berkeley-Hill, the distinguished English genito-urinary surgeon and syphilographer, died recently, in the fifty-eighth year of age. He was Hunterian Professor of Surgery and Pathology in University College and Dean of the Medical Faculty.

Ribbert, of Bonn, has accepted election to the chair of Pathological Anatomy in the University of Zurich, succeeding Klebs, who has resigned.

Albert James Bernays, lecturer on chemistry and toxicology at St. Thomas's Hospital, died recently, sixty-nine years old. The remains were cremated.

BOOKS AND PAMPHLETS RECEIVED.

The Transactions of the Association of Military Surgeons of the National Guard of the United States for the Year 1891. Chicago and Milwaukee: Burdick, Armitage & Allen, 1891.

Criminology. By Arthur MacDonald. Reprint, 1892.

Concealed Pregnancy. By Albert Vander Veer, M.D. Reprint, 1891.

Tubercular Peritonitis. By A. Vander Veer, M.D. Reprint, 1891.

Report of a Case of Hematophilia. By A. Vander Veer, M.D. Reprint, 1891.

Retro-peritoneal Tumors, etc. By Albert Vander Veer, M.D. Reprint, 1892.

COMMUNICATIONS are invited from all parts of the world. Original articles contributed exclusively to THE MEDICAL NEWS will upon publication be liberally paid for, or 250 reprints will be furnished instead of payment, provided that the request for reprints be noted by the author at the top of the manuscript. When necessary to elucidate the text, illustrations will be provided without cost to the author.

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